Public Utilities

FORTNIGHTLY

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October 14, 1937

AN INSTITUTIONAL INVESTOR SCANS THE UTILITY HORIZON
By Fergus J. McDiarmid

« »

Strikers, Let Utilities Alone
By Carlisle Bargeron

« »

Letter to a Utility President
By Ralph B. Cooney

78

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PUBLISHERS

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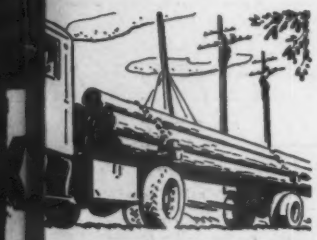

the exact size and type of tire that will give the best service, but also indicates the probable life of tire equipment, present tire costs and what tire costs should be.

This device alone has saved thousands of dollars for truck owners.

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Contributing Editor—OWEN ELY

Public Utilities Fortnightly

VOLUME XX *October 14, 1937* NUMBER 8

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¶ *This magazine is an open forum for the free expression of opinion concerning public utility regulation and allied topics. It is supported by subscription and advertising revenue; it is not the mouthpiece of any group or faction; it is not under the editorial supervision of, nor does it bear the endorsement of, any organization or association. The editors do not assume responsibility for the opinions expressed by its contributors.*

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Pages with the Editors

SOMETIMES we wonder if William Green and John L. Lewis are ever disturbed with visions of the organized labor movement getting too big and unwieldy for its own good. So far both the AFL boss and his CIO rival have given the general impression that they are chiefly concerned right now with signing up as many dues-paying members as quickly as possible and then moving on through the inevitable steps of bargaining for recognition, closed shop, wages-and-hours negotiations, and, possibly, for that apple of the union leader's eye—the check-off.

RECENT widespread discussion of the labor movement in this country, however, has made a number of folks wonder what the union chieftains aim to do when the demands of their followers run smack dab into the interest of the consuming public as they have in France, for example. Whether the unions succeed in organizing all industry and commerce or only part of it, sooner or later, it would seem, this conflict of interest is bound to come out into the open.

IF all business is organized by unions, obviously the advantages of wage increases will be about cancelled by the increase in the cost of living which the workers have to pay. Naturally, the butcher, baker, etc., will add on the extra cost of extra wages for their help to the retail price. Professional men and farmers will undoubtedly increase their price for service to the workers as their own cost of living rises. So what? Wouldn't that be something like playing every number on a roulette wheel and then banking the game to boot? Who could win? If the unionization is only partial, the economic dislocation would seem even more inequitable. The products of union labor would have to compete in the market with the products of nonunion labor; and a complicated system of regional tariff protection, perhaps under the disguise of Federal wages-and-hours legislation, would probably be required to restore commercial equality.

FERGUS J. MC DIARMID

What do insurance company investors really think of the public ownership situation?

(SEE PAGE 451)

CARLISLE BARGERON

Should the hand that pulls the power switch get a good slap?

(SEE PAGE 464)

THIS inevitable conflict between consumer interest and union organization is brought to our mind especially in connection with utility service. Several weeks ago in the District of Columbia, the city's utilities commission was going over a proposed rate reduction with a local utility company. During the confab, who should appear in person but a representative from the CIO who asked that the proposed rate reduction be postponed on grounds that it might jeopardize labor's rights to better wages and working conditions. He added that the CIO was attempting to organize the utility's workers and expected to have something to say about wages later on.

THERE was a clean-cut example of the labor movement swinging into a position adverse to

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the consumers. Those concerned with the regulation of public utilities, who have witnessed the emphasis placed on utility rate reductions during the last four or five years, will recognize that the more rapidly utilities are unionized, the sooner must come a showdown as to who is to be the ultimate boss of a utility's operating expenses. Will the answer be more regulatory law, giving commissions supervisory power over utility wage levels? Or will the unions be allowed a free hand in boosting wage demands for "all the traffic will bear."

ANOTHER problem of utility labor organization that seems to be demanding a solution even sooner than wage regulation is the right of utility employees to strike. Most of us will recall President Roosevelt's recent remarks to the effect that government employees may organize but should not be permitted to strike. How about utility employees, who stand in the next circle of public interest? Does the importance of the public services in which they are engaged demand similar restriction on the workers' right to strike?

APPARENTLY the relatively few government officials who have been faced with utility strike problems think that some such restriction is in order. The remarks of Governor Murphy on the Saginaw, Mich., power cut-off last spring and the more recent demands of Mayors Couzens and LaGuardia that there be no gas strike in Detroit nor subway strike in New York, respectively, followed the same line of reasoning. In this issue we present an analysis of this important question by a well-known commentator, CARLISLE BARGERON, whose daily column on political affairs appears in *The Washington* (D. C.) *Times*.

RALPH B. COONEY

He talks to utility presidents like a Dutch uncle.

(SEE PAGE 471)

EVER since the article by FERGUS J. MCDIARMID, "An Insurance Man Looks at Public Utilities," appeared in the FORTNIGHTLY last December, the editors have been pestering MR. MCDIARMID for more of the same. He was agreeable about it but also a slow and careful writer. It took him months to size up the situation and give us his second insurance man's eye view of the utility situation. But it finally arrived and all the more welcome for MR. MCDIARMID'S painstaking deliberation. In this instalment (starting page 451) he stresses the public ownership competitive angle in weighing the investment advantages of private utility securities. The author, a graduate of the University of Toronto, is a noted actuarial expert who has been associated with the Lincoln National Life Insurance Company of Fort Wayne, Ind., since 1928.

ANOTHER Indianan is responsible for the third feature article in this issue. He is RALPH B. COONEY, who was born in Indianapolis and graduated from Indiana University. MR. COONEY is now advertising and promotion manager for Bing & Bing, Inc., real estate firm of New York city. He has written numerous articles in trade and business magazines and should be remembered by FORTNIGHTLY readers for former contributions to this publication. In this issue (page 471) MR. COONEY undertakes to write an open letter to utility presidents in general, telling them what they must do to be saved or something. No doubt, most utility presidents nowadays get a lot of advice along this line (and probably along other lines as well), but take our word for it, MR. COONEY really has some suggestions well worth reading.

AMONG the important decisions preprinted from *Public Utilities Reports* in the back of this number, may be found the following:

OHIO telephone companies have been required to meet the demand for monophone stations. (See page 15.)

AN electric company operating within the sphere of activity of the Tennessee Valley Authority may issue securities to finance generating plant construction where this would be more economical than power purchase from the power authority, it is held by the Tennessee commission. (See page 17.)

THE Connecticut commission has established a uniform motor freight classification. (See page 50.)

THE next number of this magazine will be out October 28th.

The Editors

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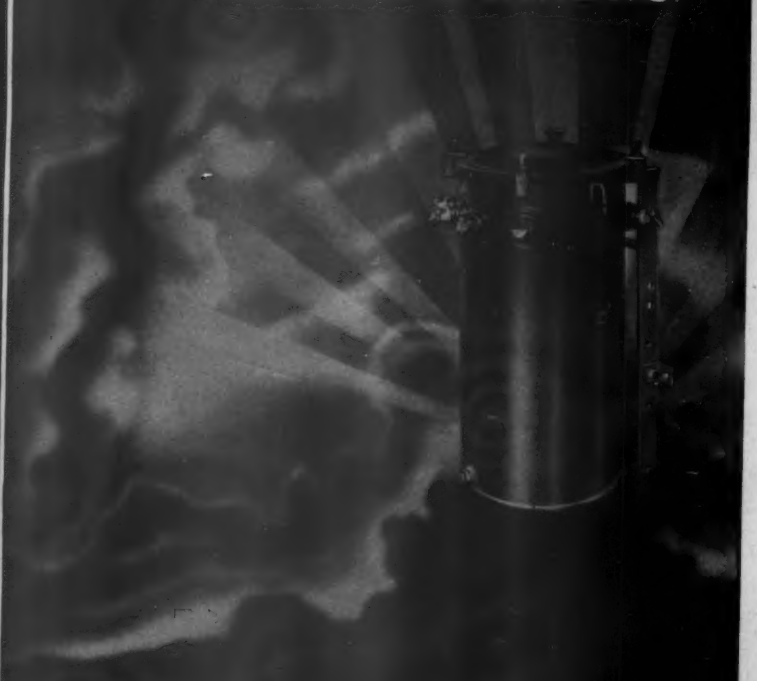

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Remarkable Remarks

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—MONTAIGNE

CARROLL MILLER
Chairman, Interstate Commerce Commission.

"If some government agency isn't given control of the airlines, there soon will be an overbuilding condition that will force some of the air firms to the wall."

Z. STARR ARMSTRONG
City Councilman, Dallas, Texas.

"Some firms make these [utility valuation] appraisals for as low as $25,000. But they seldom win cases. Other firms charge about $100,000 and they win cases."

WALTER A. FORBUSH
Vice President, Edison Electric Illuminating Company of Brockton (Mass.).

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ADAM S. BENNION
Assistant to the President, Utah Power and Light Company.

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CHARLES W. KELLOGG
President, Edison Electric Institute.

"There is practically no line of business in which the saving in cost to the taxpayer could be so small from a given expenditure of tax money as in the electric business."

R. C. MUIR
Vice President in Charge of Engineering, General Electric Co.

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ROBERT E. HEALY
Member, Securities and Exchange Commission.

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WILLIAM E. LEE
Member, Interstate Commerce Commission.

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Professor of Accounting, New York School of Commerce.

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DR. MORRIS FISHBEIN
Editor, Journal of the American Medical Association.

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H. P. LIVERSIDGE
Vice President and General Manager, Philadelphia Electric Company.

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FRANK R. McNINCH
Chairman, Federal Power Commission.

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DAN W. TRACY
Wire from President, International Brotherhood of Electrical Workers.

"The decision of National Labor Relations Board involving so-called National Electric Products Corporation case is direct attack upon International Brotherhood of Electrical Workers, a labor organization with nearly half a century of honorable service. That decision strikes at the right of legitimate labor unions to enter into labor contracts and agreements with fair employers."

MAX LOWENTHAL
Counsel to Subcommittee of Interstate Commerce Committee of the U. S. Senate.

"In the truest sense, there is nobody, in many [reorganization] cases, there is no committee in many cases, which represents most of the security holders or many of the security holders, or which represents them truly, faithfully, with a single mind to their interest. That is the nature of this situation. It is everybody's business and it is so often, in such a case, nobody's business."

WILLIAM O. DOUGLAS
Chairman, Securities and Exchange Commission.

"States have been vying, one with the other, to get the [corporation] business. It has been a profitable business. And as a result no one single state, in view of that competition, has been able to set up adequate corporate statutes, because if they do tighten them up in the public interest and in the interest of investors, those who organize corporations will be sure to stay away from that state, if they can do so."

JOHN E. ROE
Special Counsel, Wisconsin Development Authority.

"If the giving of stunt flights at the state fair is a proper public purpose for which the tax dollars of widows, orphans, and John Q. Public may be used, it would seem entirely unreasonable to contend that state funds may not be appropriated in a manner reasonably calculated by the legislature to promote and encourage the more widespread and economic distribution of energy to the people of this state."

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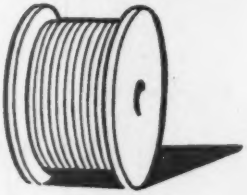

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20'
30'
OR AN OIL TANK THIS BIG . . . .
10'
40'
. . . . TO FURNISH HEAT EQUIVALENT TO THAT OF THE NATURAL GAS THAT CAN BE MEASURED BY THIS EMCO No. 5 METER, OPERATING 10 HOURS A DAY, MONTHLY
3'11¾"
1'8½"
3'4"

PITTSBURGH EQUITABLE METER CO.
MERCO NORDSTROM VALVE CO.
MAIN OFFICE: PITTSBURGH, PA.

NEW YORK LOS ANGELES TULSA HOUSTON MEMPHIS BUFFALO
COLUMBIA KANSAS CITY CHICAGO PHILADELPHIA ATLANTA OAKLAND

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● A positive rear end air seal eliminating rear arches, and water backs, and permitting a less costly furnace construction . . . 50% less carbon loss in the ash . . . an even depth of fuel bed maintained automatically, side to side and front to rear, providing uniform passage for the air, eliminating stratification of the gases and permitting rapid pickup . . . these are just a few of the many exclusive features Stowe Stokers, and only Stowe Stokers, can give you.

Of great importance to management and purchasing personnel is the unlimited fuel selection. Stowe Stokers of similar construction are burning the entire range of fuels from 5% Pocahontas slack to the high ash low fusing coals found west of the Mississippi River. They permit operators to burn the coal that represents lowest cost per B.t.u. laid down on their storage piles, and to change from one coal to another as strikes, fires, fluctuating mine prices and changing rail, water or truck rates, makes this coal or that the most advantageous to burn.

Characterized by impartial observers as the greatest forward step in mechanical firing in the last ten years, Stowe Stokers are the obvious first choice for new boiler and modernization projects. Write for a full description and the illustrated catalog. It will pay you to investigate Stowe Stokers' possibilities for your plant!

GET A STOWE STOKER PROPOSITION . . . A LETTER WILL BRING IT ●

THE JOHNSTON and JENNINGS CO., 977 Addison Rd., Cleveland, Ohio

STOWE STOKERS

Compensating Feed

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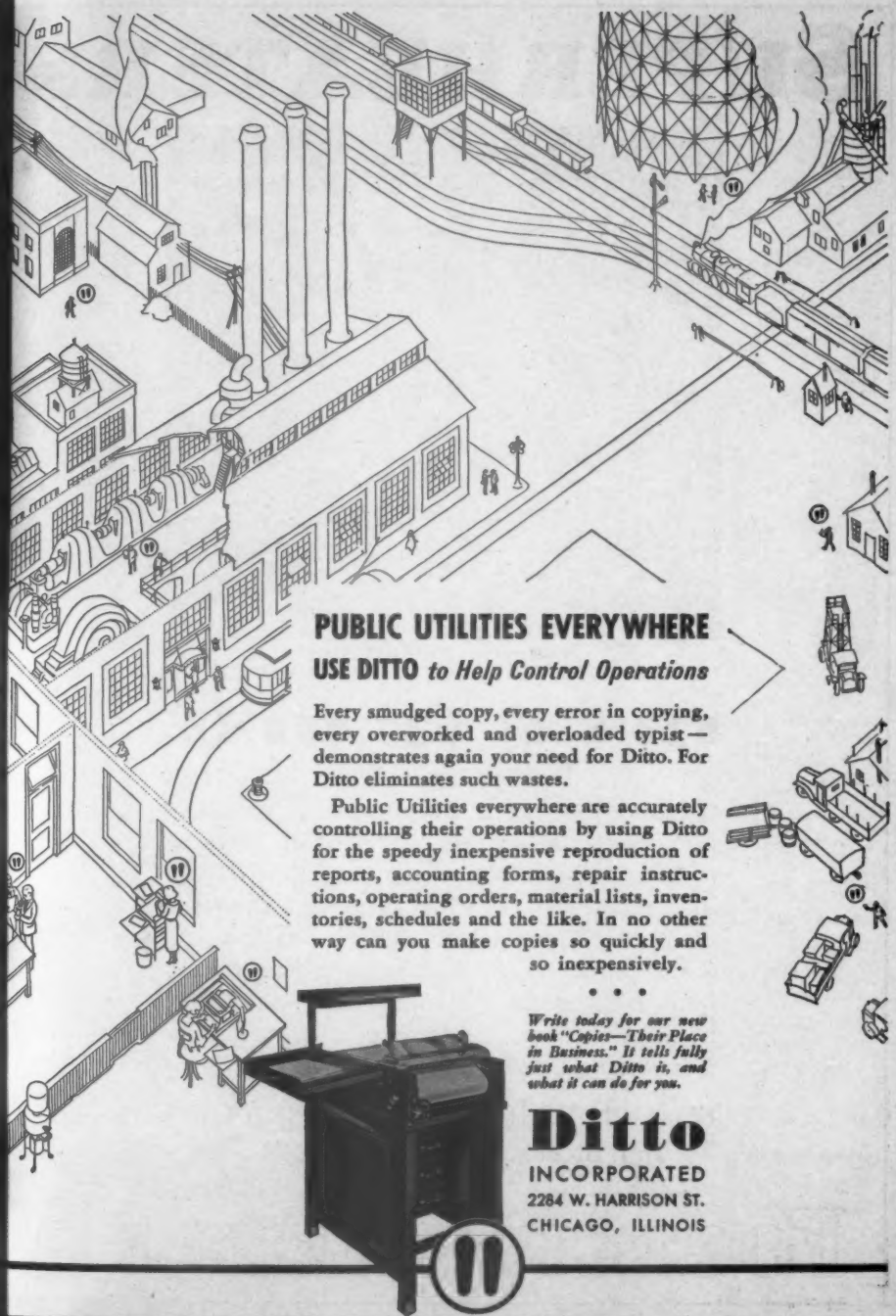

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Public Utilities everywhere are accurately controlling their operations by using Ditto for the speedy inexpensive reproduction of reports, accounting forms, repair instructions, operating orders, material lists, inventories, schedules and the like. In no other way can you make copies so quickly and so inexpensively.

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CHICAGO, ILLINOIS

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SUPERHEATERS

PORT WASHINGTON STATION
THE MILWAUKEE ELECTRIC RAILWAY AND LIGHT COMPANY

830°F at 635,000 lb.

The fifth high pressure boiler of the Milwaukee Electric Railway and Light Company to be equipped with Foster Wheeler radiant superheaters is at the Port Washington Station. Combination superheaters, including radiant superheaters in the end walls, superheat 635,000 lb. of steam per hour to 830 deg. F. Radiant reheaters in the back wall superheat 590,000 lb. of steam per hour to 835 deg. F.

FOSTER WHEELER CORPORATION
165 Broadway, New York, N. Y.

FOSTER WHEELER

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Davey Clears Lines

- *Economically*
- *Skillfully*
- *Quickly*
- *With Safety*

Always use dependable Davey Service

DAVEY TREE EXPERT CO. KENT, OHIO

DAVEY TREE SERVICE

BULBS FREE!

To spread the fame of our bulbs everywhere, we will send you FREE a nice assortment of

HYACINTHS, TULIPS, NARCISSI, IRISES, CROCUS, etc., etc.

350 bulbs in all, all guaranteed to flower next Spring and Summer. It suffices to send us for carriage, packing, etc. a one-dollar note by registered letter, and to mention your name and full address in block letters. Please, do not send coins or stamps, and mention the name of this paper. Dispatch carriage paid all over the world without increase in price.

JAN VAN GALEN

Bulb Grower,

VOGELENZANG near Haarlem, HOLLAND, EUROPE

RURAL LINE CONSTRUCTION

Calls for long term economy in operation.

Porcelain Products rural line insulators offer more insulating features, more service for dollar value.

Write for Rural Line Insulator Bulletin, RF-5

PORCELAIN PRODUCTS, INC.
PARKERSBURG, W. VA., U. S. A.

Hi-Voltage Insulators —*Since 1894*

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ROLLING DOORS

MOTOR OPERATED STEEL ROLLING DOORS FOR SPACE AND LABOR ECONOMY

There is a Kinnear Answer to every Doorway Problem!

Kinnear Rolling Doors and Grilles open upward — out of the way. Convenient as a window shade! Allowing space once used for "door storage" to be utilized . . . and today's planning demands that every foot count. So if the need calls for either a barrier against intrusion or a full fledged door, the word Kinnear in your specifications assures maximum space economy—plus designing cooperation, efficient and durable construction, and permanent nation-wide service that only Kinnear's years of specialization makes possible. Send us your problem, we will gladly submit recommendations, without any obligation on your part.

THE KINNEAR MFG. CO.

2060-80 FIELDS AVE. **COLUMBUS, OHIO**

ROLLING GRILLES FOR PROTECTION AGAINST INTRUSION

KINNEAR
ROLLING GRILLES

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DESIGNED by Exide engineers for exciter and other stationary services, early in the history of this Company, the Exide-Chloride Battery has been for nearly half a century the choice of consulting and operating engineers all over the world.

For floating service no battery has yet been designed that will give greater satisfaction and life with such low maintenance. Write for Bulletin 204 and learn more about this exceptional time-tried battery.

Exide
CHLORIDE BATTERIES

THE ELECTRIC STORAGE BATTERY CO.

The World's Largest Manufacturers of Storage Batteries for Every Purpose

PHILADELPHIA

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HAYS A GOOD NAME ON BRASS

GOOD products, good service and fair business tactics built a good name, HAYS. Since 1869 we have striven in every way to make folks like to do business with Hays. The name, Hays, impressed on a product is your assurance of first grade quality—it is our mark of responsibility for the good performance of that product thru the years. Our more than 66 years of experience can be at your fingertip. Just write for catalogues on Water and Gas Products and the Hays Copper Plumbing Method.

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WHO'S WHO

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A directory, with biographical data, of Federal officials and employees whose duties embrace utility regulation and other utility problems, including construction and operation of Federal properties.

Compiled by GEORGE E. DOYING, *Editor*

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A valuable reference guide to government personnel in the field of public utilities—electric, gas, transportation, communications.

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Demand These QUALITY FEATURES

HYDRAULIC BRAKES
Dodge led the field in giving you genuine hydraulic brakes that stop quick, save tires and brake linings.

FULL-FLOATING REAR AXLE
Dodge pioneered this great advancement in low-priced 1½-ton trucks to improve performance, cut upkeep.

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Only Dodge of the lowest-priced-3 gives you 4 piston rings. The others have only 3—saves gas and oil.

ONE-PIECE REAR AXLE HOUSING
And, of course, Dodge pioneered this feature, too!—Means sturdier, more dependable construction.

IN YOUR *NEW* TRUCK *and your choice must be..* DODGE

New Dodge 1½-Ton Stake—6-Cyl., "L"-Head Engine—2 Wheelbases, 9' and 12' Bodies

NEW 2-TON CHASSIS AND CAB—6-Cyl., 133" W. B. for standard tractor-trailer service, 148" W. B. for use with sleeper cab. Also 159" W. B., 177" W. B. and 220" W. B. This truck is Dodge quality all the way through. Yet the low price will amaze you.

Tune in on the Major Bowes Original Amateur Hour, Columbia Network, every Thurs., 9 to 10 P. M., E.S.T.

Easy terms gladly arranged to fit your budget, at low cost, through Commercial Credit Company.

BEFORE you buy any low-priced truck we ask you to do one simple, but important thing ...check it for money-saving features. Most truck buyers will admit that Dodge has an edge on the others in appearance...but don't stop there. Get a "show-down" of such important things as rust-proofing, that makes your truck *stay* new longer. Compare such features as springs and axle shafts—Dodge uses a tough, long-lived new steel alloy named "Amola" for these vital parts. Also check gas mileage statements. Borrow a "gasometer" from your Dodge dealer and get the real figures for yourself. It's easy, and it ends claims.

We believe you'll find that the difference in the three lowest-priced trucks is greater than you'd ever imagine! You can prove this for yourself by spending just 15 minutes with your Dodge dealer. See him today!

DODGE
Division of Chrysler Corporation

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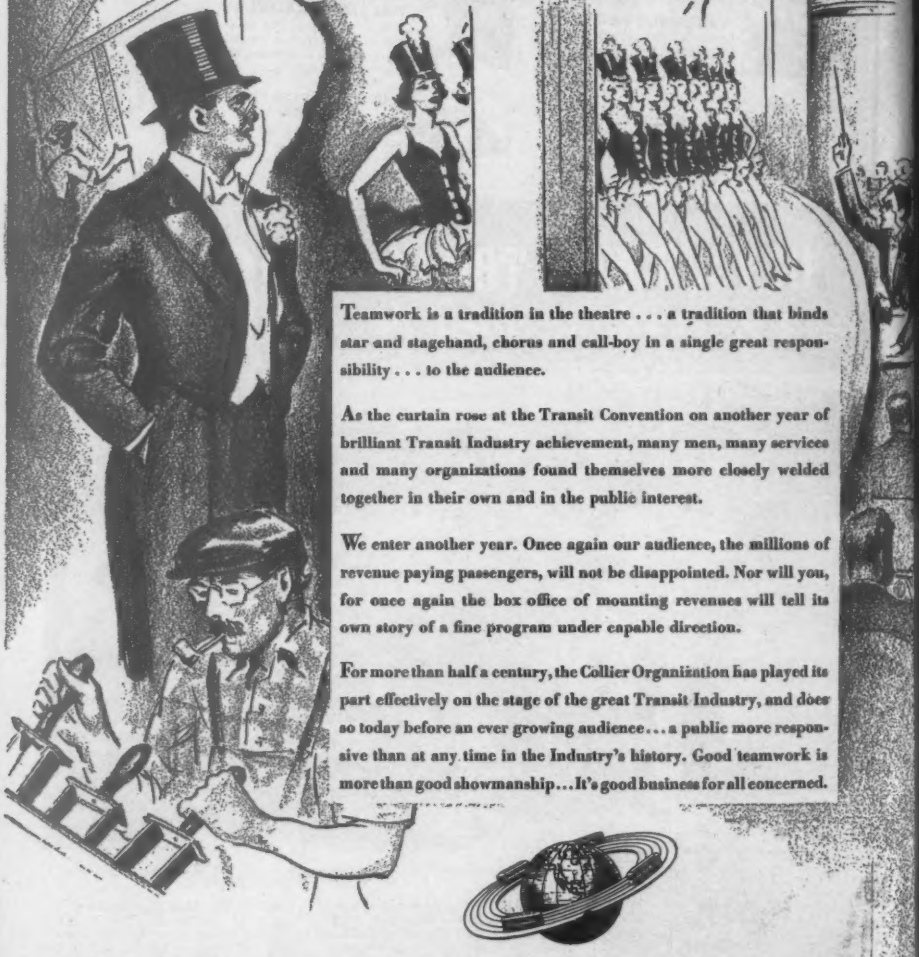
TEAMWORK
makes the show



Teamwork is a tradition in the theatre . . . a tradition that binds star and stagehand, chorus and call-boy in a single great responsibility . . . to the audience.

As the curtain rose at the Transit Convention on another year of brilliant Transit Industry achievement, many men, many services and many organizations found themselves more closely welded together in their own and in the public interest.

We enter another year. Once again our audience, the millions of revenue paying passengers, will not be disappointed. Nor will you, for once again the box office of mounting revenues will tell its own story of a fine program under capable direction.

For more than half a century, the Collier Organization has played its part effectively on the stage of the great Transit Industry, and does so today before an ever growing audience . . . a public more responsive than at any time in the Industry's history. Good teamwork is more than good showmanship . . . It's good business for all concerned.

BARRON G. COLLIER

INCORPORATED

745 FIFTH AVENUE, NEW YORK

CHEVROLET TRUCKS

THE "THRIFT CARRIERS" FOR THE NATION

They're the outstanding trucks for 1937 . . . because they're modern to the minute . . . because they give *"more power per gallon, lower cost per load"* . . . and because they're good for years of dependable service.

CHEVROLET MOTOR DIVISION
General Motors Sales Corporation
DETROIT, MICHIGAN

FOR ECONOMICAL CHEVROLET TRANSPORTATION

Powerful beyond their price, modern to the minute, famous for economical transportation, Chevrolet trucks are carrying an ever-increasing volume of the daily shipments of truck users. They're *the thrift carriers for the nation* . . . giving many thousands of miles of safe, dependable service at minimum cost. Extra-rugged construction explains their dependability; Perfected Hydraulic Brakes, their safety; and a New High-Compression Valve-in-Head Engine, their ability to give *more power per gallon, lower cost per load.*

"MORE POWER per gallon LOWER COST per load!"

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Good Will Remains Behind Hoosier Crews

HOOSIER ENGINEERING CO.

46 So. 5th St., Columbus, Ohio

Chicago — Canadian Hoosier Engineering Co., Ltd., Montreal — New York

ERECTORS OF TRANSMISSION LINES

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Sets the Pace for Economic Pipe-Laying—Meeting Completely Today's Trench Construction Demands

You, like all alert men in the utility field, are seeking cost saving equipment.

The trend of the times is toward the use of modern efficient mechanical equipment. For the trench digging operation you will find the Cleveland Baby Digger standard value.

Unsurpassed for continuous low maintenance and operation costs and general adaptability for use on the maximum percentage of your work. Add to these characteristics, its dependability and ruggedness and you have the ideal equipment for time and money saving.

Fits the Job—Gets to the Job—Does the Job

Today's Cleveland Baby Digger Model 95 is the complete answer to Public Utility requirements.

So compact and easy to handle, it affords maximum machine-usage in the crowded conditions of cities and towns and yet, so rugged and powerful it handles the most difficult digging with minimum service interruptions. With the "Baby Digger" you dig more trench in more places at least cost. Let us furnish details and specifications.

Another important "Cleveland" idea that eliminates hold-ups, cuts waste time and increases usability — high-speed, low-cost transportation via special trailer. Baby Digger loads and unloads in 10 to 15 minutes and travels from job to job at truck speed.

THE CLEVELAND TRENCHER COMPANY

"Pioneers of the Small Trencher"

20100 ST. CLAIR AVENUE CLEVELAND, OHIO

The CLEVELAND BABY DIGGER Model 95

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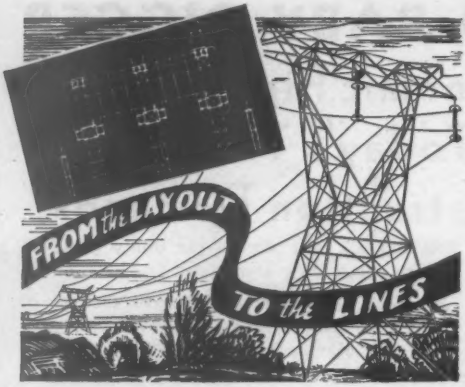

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Use R. & I. E. centralized Service for the whole job — complete substation design and equipment. There is a big advantage in putting the entire problem under one responsibility.

In R. & I. E., the Public Utilities have found engineering ability to cope with every outdoor and indoor switching problem. Here are complete design and manufacturing facilities under one roof.

From the layout to the lines, R. & I. E. offers the benefit of twenty-five years experience.

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Tree Trimming Tools

No. 777 Two Hand Pruner
Drop forged tool steel. Rapid cutter. Blade may be placed next to main limb of tree with hook handle held in LEFT hand. Right hand is FREE to operate blade. 28" handles.

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Most powerful compound lever Tree Trimmer made. Will easily sever branches up to 1¼" diam. Pulley and compound lever give 9 to 1 cutting power. Head complete weighs only 1¾ lbs. 4 to 16 ft. lengths. Other types.

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For pruning larger limbs than our No. 1 Tree Trimmer. No. 43 has 12 in. drag tooth blade. No. 44 has 16 in. peg tooth blade with 7 teeth per inch. Saw is adjustable. Light weight.

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For destroying and preventing the growth of wood destroying fungi and for the protection of wounds, use Bartlett's Tree Paint. Easily applied with ordinary paint brush.

Used by U. S. Government State Highway Departments and Tree Experts

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(My commission expires October 23, 1938.)

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GRAVER TANKS

WATER CONDITIONING EQUIPMENT

Modernize!

Prepare for expansion — look to the future. Check your present equipment. Bring it up to date!

Highest possible efficiency and smooth, trouble-free performance are demanded of all modern equipment. The Graver Organization has served American municipalities, public utility and industrial firms for three-quarters of a century and is thoroughly experienced in the construction of the very latest type of

Gas Holder Shell and Cover for Sewage Disposal Plant, Madison, Wis.

GAS HOLDERS
FLOATING COVERS
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CONDUITS
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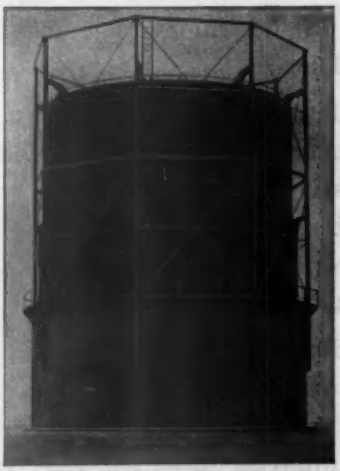
Tell us what you need and let us send Literature.



Two-Lift Gas Holder, Capacity 30,000 to 100,000 cu. ft.

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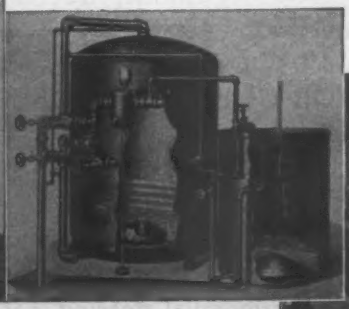
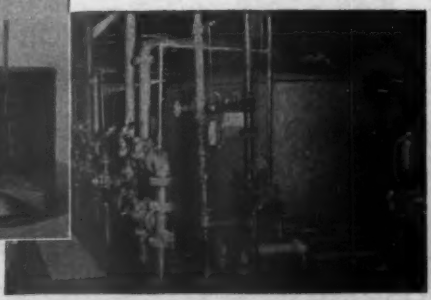
75 Years of Dependable Service

New York, N. Y. East Chicago, Ind. Chicago, Ill. Catasauqua, Pa.





LEFT—35-ft. Graver Gas Tank erected at Noppanee, Ind.
CENTER—Graver Zeolite Water Softener.
RIGHT—Graver Pressure Filter.

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Hole Dug and Post Set for 44¢

Over a period of six weeks, this Cletrac with post hole auger, set poles at a cost of 44 cents each.

On another installation, the average cost was 23 cents.

By hand, the average cost is $3.00.

Cletracs are built to cut costs . . . to handle a wide variety of equipment that enables fewer men to do more work and do it better, easier, more profitably.

Ideally fitted to public utility work because of ease of handling, sturdiness of construction, and simplicity of maintenance, the Cletrac warrants thorough investigation. See your distributo Among the fifteen models fro 22 to 94 horsepower, there is t right size for every job. Eith gasoline, tractor fuel, or Dies powered.

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Cletrac
Crawler Tractors

The only tractors with controlled differential steering that keeps both tra pulling at all times . . . on the turn as well as on the straightaw

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Investigate the L&H line of quality built ranges—smart styling, lustrous porcelain enamel finish enhanced by sparkling chrome trim—and all the handy, modern convenience features that tempt today's buyers.

Wire or write for complete facts.

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MILWAUKEE, WISCONSIN

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Write for details of this tried and proven plan that benefits you doubly through increased commercial load and better public relations. It takes but a minute to bring the entire story to your desk . . . another, to decide upon its merits. You can't lose.

AMERICAN

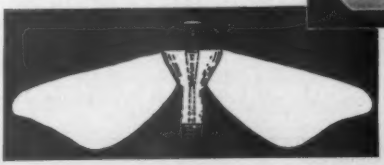
STREET ILLUMINATING COMPANY

261 N. Broad St., Philadelphia, Pa.

"Backed by 59 Years' Street Lighting Experience."

30 to 50% MORE EFFECTIVE STREET LIGHTING

CONTROLS AND DIRECTS THE LIGHT TOWARD SURFACES TO BE ILLUMINATED



WRITE FOR DETAILS

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KLEIN-KORD

Under test "Klein-Kord" Safety Straps will take a load of 7500 lbs. before ripping at the tongue. The tensile strength per square inch of "Klein-Kord" is 5660 lbs.

The new "Klein-Kord" Safety Strap consists of six plies of heavy, close-woven, long fibre cotton laid in rubber and vulcanized, producing a strong, flexible strap for maximum strength and maximum service. Write for complete information on this newest development in safety for linemen.

Mathias Established 1857 **KLEIN** & Sons Chicago, Ill. U.S.A.

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Insulators are only as good as the experience and workmanship put into their production.

Our product is produced by men of the greatest experience to be found in the industry.

VICTOR made insulators are GOOD INSULATORS.

Catalog on request

Victor Insulators, Inc.
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Public Utilities Fortnightly

THE review magazine of current opinion and news relating to public utilities. Conducted as an open forum for the frank discussion of both sides of controversial questions — economic, legal and financial; also gives trends in the present-day control of these companies—governmental competition — state and Federal regulation.

¶ Issued every other Thursday—26 numbers a year—annual subscription $15.00.

¶ The only magazine furnishing current and vital information on all subjects involving the financing, operation, and management of public utilities under governmental regulation and competition.

¶ A magazine of unusual value and current stimulation to all persons holding positions with, or having a financial interest in, public utilities.

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TAYLOR STOKER UNITS
TAYLOR STOKERS
FURNACES *(Water-Cooled)*
ASH HOPPERS

Eliminate the smoke nuisance

Companies in great population centers—New York, Brooklyn, Philadelphia, Washington, D.C., Chicago, Detroit, Boston, New Haven, Providence, Springfield, Dayton, Toledo, and many others—home and abroad—keep their communities contented by firing with Taylor Stokers, for Taylor Stokers satisfy the most stringent anti-smoke ordinances.

Division: AMERICAN ENGINEERING COMPANY
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Other Products. A-E-CO LO-HED MONORAIL ELECTRIC HOISTS, A-E-CO HELE-SHAW PUMPS, MOTORS AND TRANSMISSIONS, A-E-CO MARINE AND YACHT AUXILIARIES

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RILEY PULVERIZERS
in Central Station

Plant after plant in the Public Utility industry has swung to Rile Pulverizers . . . definitely establishing Riley as one of the leade

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A few Public Utilities using Riley Pulverizers . . .

Union Electric Light & Power, Cahokia . . . Repeat Order
Edison Electric Illuminating Co., Boston . . . Repeat Ord
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RILEY STOKER CORPORATION
WORCESTER, MASS.

BOSTON NEW YORK PHILADELPHIA PITTSBURGH BUFFALO CLEVELAND DETROIT TACOMA
ST. LOUIS CINCINNATI HOUSTON CHICAGO ST. PAUL KANSAS CITY LOS ANGELES ATLANTA

COMPLETE STEAM GENERATING UNITS
BOILERS - SUPERHEATERS - AIR HEATERS - ECONOMIZERS - WATER-COOLED FURNACE
PULVERIZERS - BURNERS - MECHANICAL STOKERS - STEEL-CLAD INSULATED SETTING

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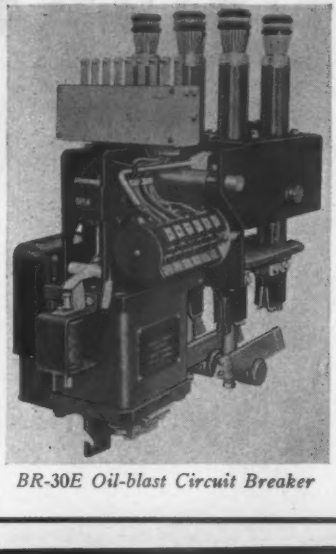
METAL-CLAD Switchgear



BR-30E Oil-blast Circuit Breaker

This new "BR-30E" oil-blast circuit breaker is built in 400 and 600 ampere capacities at 7.5 K.V. and 800 amperes at 5 K.V. Rupturing capacity is 25,000 KVA.

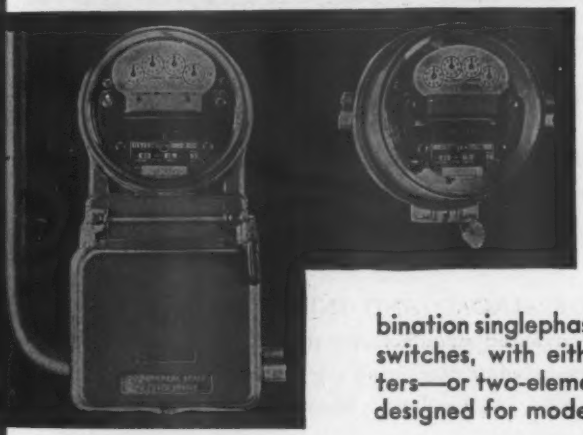
Primarily designed for use in Type "RA" vertical lift Metal-Clad Switchgear, it is shown with tank and mechanism covers removed. It is complete with lifting ears, positive interlock bars, primary and secondary plug disconnectors.

The solenoid mechanism and breaker head are an integral unit with internal operating linkage. Exceptionally sturdy, the design insures permanent adjustment at all times. Also built for manual operation.

Our New Bulletin No. 66 Shows a Complete Line of Metal-Clad Switchgear in Capacities to 500,000 K.V.A.

Delta-Star Electric Co

2400 BLOCK FULTON STREET, CHICAGO, ILL.



Sangamo Meters in "A" and "S" Mountings

Sangamo modern meters, whether singlephase watthour meters—combination singlephase watthour meters and time-switches, with either single or two-rate registers—or two-element watthour meters—all are designed for modern "A" and "S" mountings.

Modern Meters for Modern Loads!

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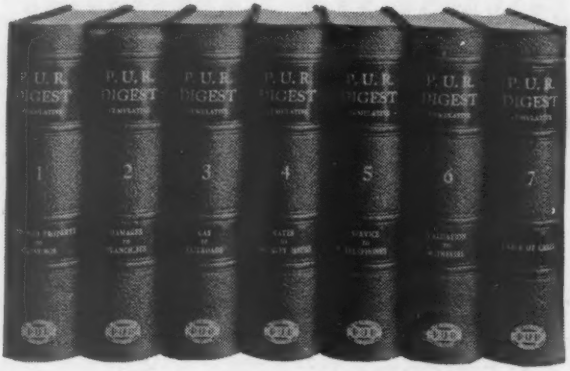

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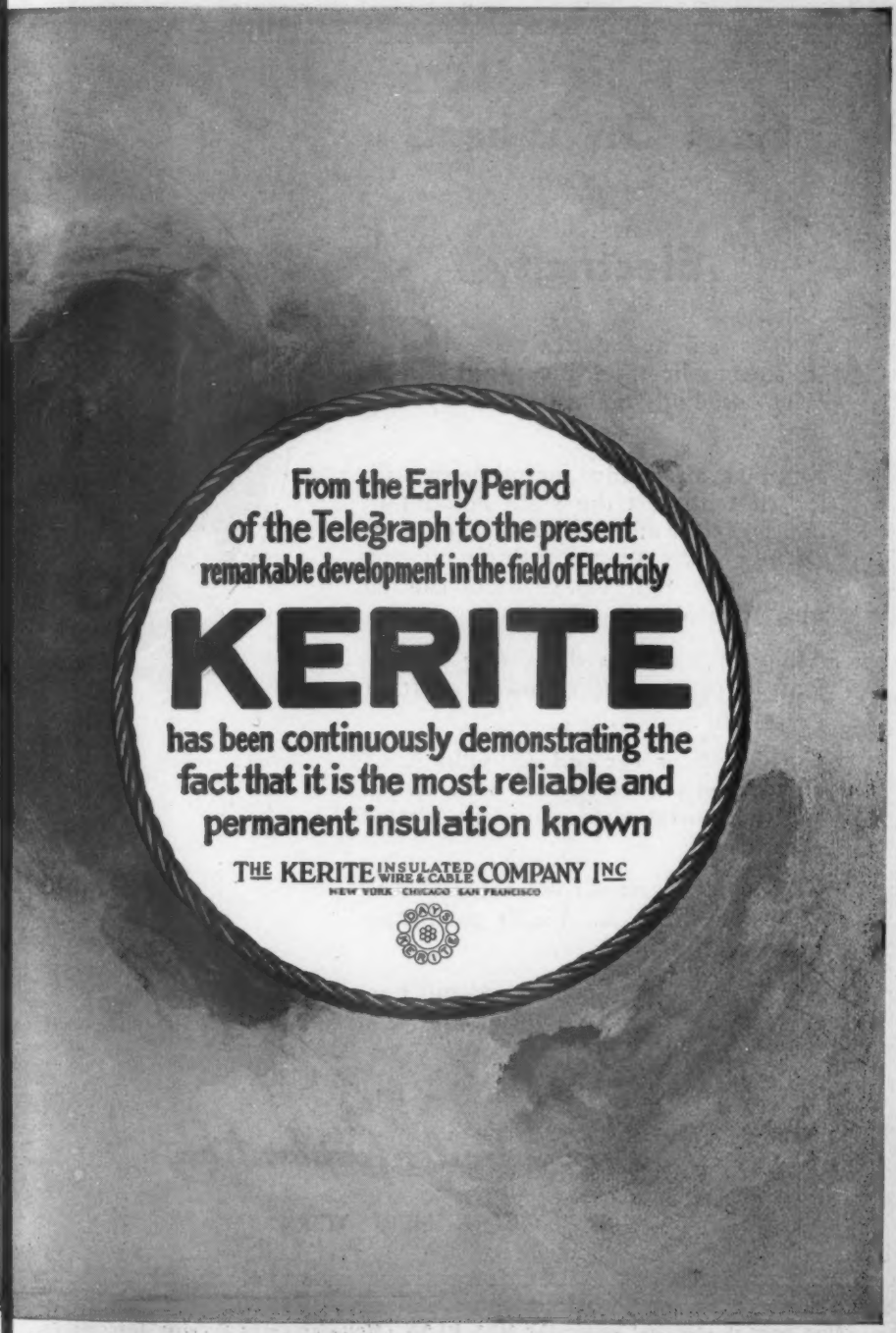
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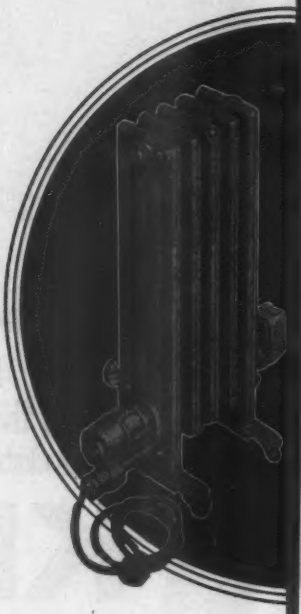
By

Electricity



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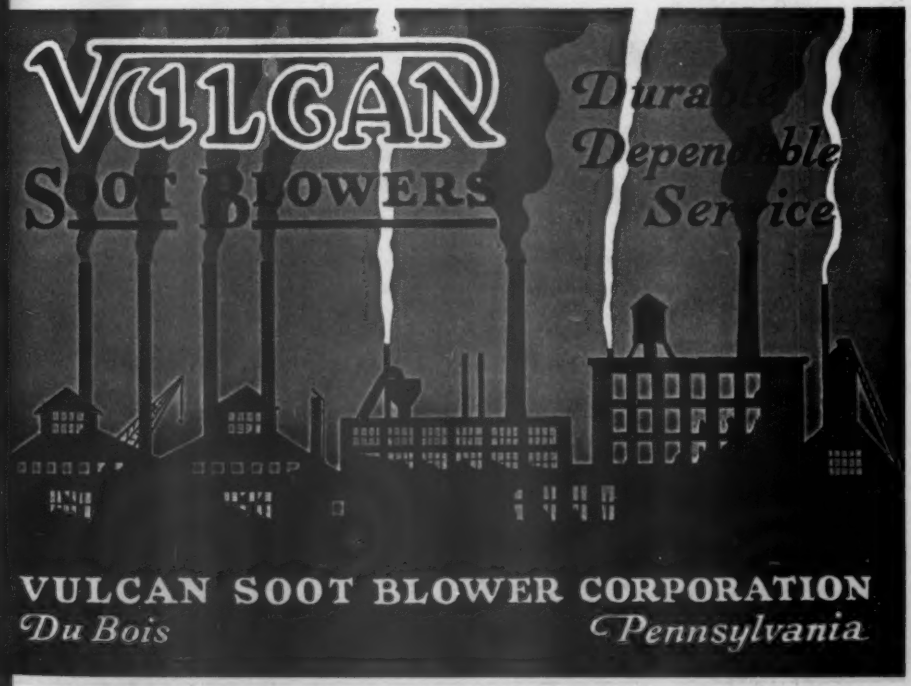

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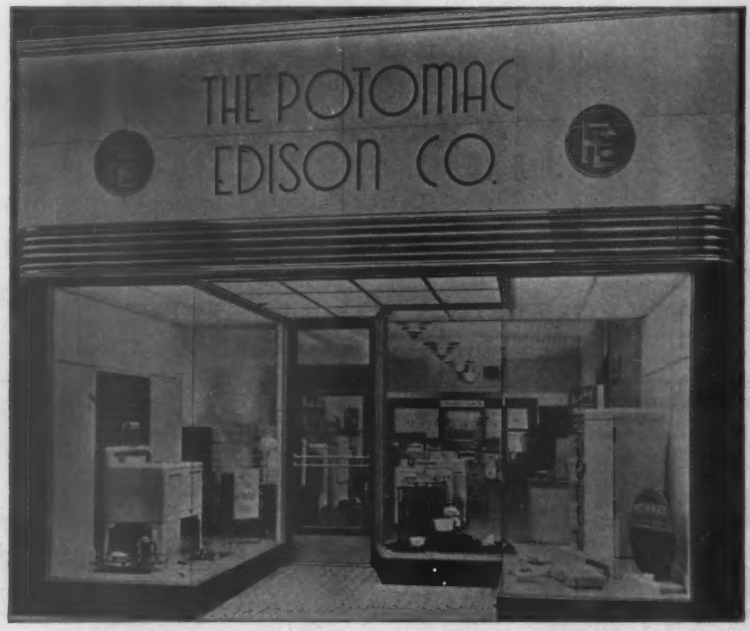

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Utilities Almanack

OCTOBER

14	T^{h}	¶ *Independent Pioneer Telephone Association of the United States opens convention, Chicago, Ill., 1937.*
15	F	¶ *National Safety Council concludes meeting, Kansas City, Mo., 1937.* ¶ *Pennsylvania Water Works Association ends session, Atlantic City, N. J., 1937.*
16	S^{a}	¶ *Electrochemical Society ends fall meeting, St. Louis, Mo., 1937.* ¶ *Amer. Water Works Asso., New Jersey Dist., starts meeting, Atlantic City, N. J., 1937.*
17	S	¶ *American Water Works Association, Minnesota Section, will hold convention, St. Paul, Minn., October 28–30, 1937.*
18	M	¶ *American Society for Metals opens 1937 Metal Congress and Exposition, Atlantic City, N. J., 1937.*
19	T^{u}	¶ *American Railway Bridge & Building Association opens convention, Chicago, Ill., 1937.*
20	W	¶ *American Water Works Association, California Section, starts convention, Sacramento, Calif., 1937.*
21	T^{h}	¶ *Indiana Electric Association starts convention, French Lick Springs, Ind., 1937.*
22	F	¶ *American Water Works Association, Virginia Section, will convene for session, Richmond, Va., November 4–6, 1937.*
23	S^{a}	¶ *American Petroleum Institute will hold convention, Chicago, Ill., November 9–12, 1937.*
24	S	¶ *National Electrical Manufacturers' Association begins session, Chicago, Ill., 1937.*
25	M	¶ *League of Kansas Municipalities opens meeting, Dodge City, Kan., 1937.*
26	T^{u}	¶ *Seventeenth Annual Gas School Conference will be held, Iowa State College, Ames, Iowa, November 10–13, 1937.*
27	W	¶ *American Institute of Steel Construction, Inc., starts convention, White Sulphur Springs, W. Va., 1937.*

Photo by William M. Rittase

A Mammoth Dines

Public Utilities
FORTNIGHTLY

VOL. XX; No. 8 OCTOBER 14, 1937

An Institutional Investor Scans The Utility Horizon

To those who take a pessimistic view of utility securities, where, asks the author, is there a better field for the investment of trust funds? Widespread interest of the public in the prosperity of the utility companies. — Effect of government competition and of regulation.

BY FERGUS J. McDIARMID

THE property of our public utilities forms what is probably the largest body of corporately owned fixed capital in the United States. Their securities therefore—particularly their senior securities—form an exceedingly important depository for the savings of our people. Their almost $15,000,000,000 of long-term debt outstanding is equal to 20 per cent of the total long-term private debt in the country. Of this debt, close to $7,000,000,000 or around 47 per cent of the total is secured by electric property, about 10 per cent is backed by telephone and telegraph property, 8 per cent by gas property, 4 per cent by water property, and around 15 per cent by electric railway property. The remaining 16 per cent is secured by other types of property which fall under the rather broad classification of public utilities.

Who owns our utilities? At the present stage of our political and social development this matter of ownership

is a rather crucial point. The utilities are by nature monopolies and the services which they sell have become necessities. If it were ever established that the ownership of the utilities rests in the hands of a comparatively small group of our population, the chances of these undertakings remaining in private hands for long would be relatively remote. The social and political pressure in favor of direct public control would probably prove irresistible. If on the other hand it could be clearly shown that the ownership of these utilities is already broadly diffused throughout the greater part of our population, the case for continued private ownership is immeasurably strengthened.

There is considerable evidence to support the latter hypothesis. The large utility companies can point to tens of thousands of individual stockholders. However, it is probably through the medium of their senior securities that their ownership is most widely distributed. At the end of 1936, the 49 leading legal reserve life insurance companies reporting to the Life Insurance Presidents' Association held $2,278,000,000 of public utility bonds, an amount equal to 15 per cent of the total utility debt. Savings and commercial banks account for a somewhat smaller proportion of that debt. To say that over 15 per cent of the total utility debt is held by life insurance companies does not convey the whole story. Life company holdings of electric railway bonds are quite light. They probably own a larger proportion of electric bonds than the bonds of any other division of the utility business. In the recent extensive refunding it has been the electric and telephone companies which have figured most prominently. In this process it has not been an unknown proceeding for a single life insurance company to absorb the entire bonded indebtedness of a sizeable utility. Instances in which a number of life insurance companies have combined to do this have been rather common. There can be little doubt that these extensive refundings have tended to throw an ever-increasing proportion of the bonded indebtedness of the electric and telephone utilities into the portfolios of fiduciary institutions such as life insurance companies and savings banks. The yields offered have simply not appealed to individual investors, especially in the face of a rising stock and real estate market. It is a well-known fact that if a new refunding issue were looked upon with disfavor by the large life insurance companies, it did not stand a very good chance of going over.

EVEN in the case of those electric companies which for one reason or another have not yet refunded, it is difficult to find an instance in which a substantial proportion of the bonds is not held by life insurance companies. Select a few cases at random. About one-third of the bonds of Alabama Power are so held; almost one-half those of Milwaukee Electric Railway and Light are so held; while in the case of sorely threatened Memphis Power and Light the proportion runs up to around 60 per cent. An educated guess that at least 25 per cent of the bonds of our electric utilities are owned by life insurance companies would in all probability be borne out by a detailed investigation. And this pro-

portion is increasing steadily. The savings banks and commercial banks account for another sizeable fraction of the electric utility debt.

But why so much concern as to the proportion of utility bonds which are held by life insurance companies? Simply because it can be demonstrated that the ownership of this part of the utility debt vests very largely in the great American middle class—which we will define as that proportion of our people whose family incomes range from $1,500 up to $10,000 annually. The mere fact that there are in the neighborhood of 132,000,000 separate life insurance policies in force makes this conclusion inevitable. Economic royalists can account for but a tiny fraction of these policies. It is not necessary to rely entirely upon circumstantial evidence to support this contention.

A LARGE life insurance company recently carried out an interesting investigation based upon a large number of applications for FHA loans. These applications contain sworn statements of the applicant's net worth, his annual income, and the amount of his life insurance. The list contained very few people with incomes over $10,000—bloated bondholders were practically nonexistent—but over 98 per cent of the applicants owned life insurance. Even in the lowest income bracket—below $2,000—less than 3 per cent were without life insurance, and the amount of life insurance carried was nearly as large in relation to income as in the higher income brackets. In fact, in the case of those with incomes over $10,000, life insurance was apparently of less relative importance than in the case of some of the lower income groups. The significance of all this? Simply that if your income is above $1,500, you are a very exceptional person if you cannot take a proprietary interest in the public utilities of America because of your ownership of life insurance.

Can the institutional investor who placed in utility securities so much of the hard won accumulations entrusted to his care feel entirely happy with his choice of a storehouse for these funds? What does he demand of such a storehouse? First and foremost comes security of principal. This is followed by the security or regularity of the return on the investment. After these two cardinal considerations the rate of return itself follows as a poor third. The idea of speculative profit simply doesn't enter at all. When a man buys a life insurance policy, to the extent of his investment therein, he has definitely turned his back on the possibility

¶ "THERE *can be little doubt that . . . extensive refundings have tended to throw an ever-increasing proportion of the bonded indebtedness of the electric and telephone utilities into the portfolios of fiduciary institutions, such as life insurance companies and savings banks. The yields offered have simply not appealed to individual investors, especially in the face of a rising stock and real estate market.*"

of speculative gain. Likewise the bonds and high grade preferred stocks, which constitute the sole interest of the life company investor in utility securities, in normal times offer little opportunity for capital appreciation. Indeed in the present period of abnormally low interest rates and high security prices the scales of chance seem to be weighted heavily in the opposite direction.

THE past record of utility securities offers much to recommend them to the investor of life insurance policyholders' funds. Their record of defaults during the recent depression was much better than that of either the rails or the industrials, as is shown in Table I. In 1929 over 95 per cent of the utility bonds in default were traction issues, a proportion which declined to 52 per cent in 1933. In that year gas bonds accounted for 14 per cent of the utility bonds in default and electric light and power bonds for 18 per cent. Nevertheless the proportion of the debt of operating utilities other than traction companies to suffer default during the depression was insignificant. This was especially true of electric operating companies.

TABLE I

PERCENTAGE OF TOTAL LONG-TERM DEBT IN DEFAULT OF INTEREST

	1929	*1933*	*1935*
Railroad Bonds	7.6%	11.2%	16.3%
Industrial Bonds	.6	8.3	6.8
Public Utility Bonds	1.8	6.0	4.6
Electric Utility Bonds	.1	2.4	1.5
Tel. & Tel. Bonds ...	.0	4.1	

Can this happy experience of utility investors in the past be safely projected into the future? Present indications would lead us to answer this question in the negative. It might as well be recognized that the utilities, and this applies most particularly to the electric utilities, have completed a definite period of their history. This period has been one of enormous physical progress and expansion. It has been one of consolidation within the industry. Earnings have been buoyed by an ever expanding business in a field in parts of which a practical monopoly existed, and in which for the most part regulation has been lax.

THE next period of utility history is likely to differ materially from that on which we have just rung down the curtain. Whether he likes it or not the investor in utility securities is faced with the problem of attempting to forecast this period in broad outline. In doing so it is dangerous to indulge in wishful thinking, to look ahead through either the blue glasses of vested interest, or the red glasses of professional reform. Let us first appraise the utilities as they exist today. It is necessary to differentiate between the various divisions of the utility business. Let us consider especially the electric utilities as being the largest division of the business, and the most important from the point of view of the institutional investor.

The public utilities supplying electricity have certain unusual if not unique characteristics. Electricity has become a sort of least common denominator of our entire material civilization. In many of its applications it is without a practical substitute. Organizations supplying it are by nature monopolistic. There exists a long-term trend, almost world-wide in its scope, to subject such undertakings to increasingly rigid public regulation. In some instances this regulation has

Electric Bonds Owned by Life Insurance Companies

"EVEN in the case of those electric companies which for one reason or another have not yet refunded, it is difficult to find an instance in which a substantial proportion of the bonds are not held by life insurance companies . . . An educated guess that at least 25 per cent of the bonds of our electric utilities are owned by life insurance companies would in all probability be borne out by a detailed investigation. And this proportion is increasing steadily."

extended to the point of limiting the earnings of privately owned undertakings to a certain rate of return on the property valuation. In certain other jurisdictions, such as the Province of Ontario, it has advanced to the point of establishing a publicly owned monopoly. In Sweden control has been exercised by direct competition between publicly and privately owned organizations. This trend toward increasing public regulation has never reversed itself. It is extremely unlikely to do so. Its advance may slow down in certain periods but in other periods such as the present it will be accelerated. In the light of this hypothesis let us consider the various possibilities facing the utilities and the manner in which the investor is likely to be affected.

THE utilities may continue to operate as private organizations. This will doubtless involve the rather general tightening up of public regulation as to permissible earnings. There are signs that certain important regulatory bodies are taking a decreasingly liberal view of what constitutes reasonable property value and what a reasonable rate of return thereon. In so doing they will doubtless serve to strengthen the position of the utilities themselves in the eyes of public opinion, their ultimate judge. However this tendency does force the institutional investor, faced with the prospect of putting large sums of other people's money into 30-year utility bonds, to do some pretty serious thinking.

First consider the matter of property value. There is a natural tendency to arrive at a property valuation by subtracting the depreciation reserve from the book value of the property. But beware of such an easy solution on two counts. Too many property book values are hangovers from the dear dead days beyond recall when money could be made more quickly by putting utility properties together than by operating them. Also in the past a good many utilities provided for depreciation and obsolescence on an inadequate basis, and the reserves which they have accumulated fall short of reflecting the true measure of depreciation and obsolescence which has occurred. Of course there are some

utilities whose property may be conservatively evaluated by subtracting the retirement reserve from the book property account, and to them the investment analyst takes off his hat. Nevertheless in a great many cases the investor must look outside of the utility's own published statements for an answer to the riddle of property value.

AT the present time there is a distinct tendency for regulatory bodies to revert to historic cost less depreciation as a basis for the valuation of utility property. From the point of view of the holders of the senior securities this basis has much to recommend it. A practical example will illustrate the point. A leading utility issued $10,000,000 of 3½ per cent 30-year bonds. The proceeds were to be used to help finance the construction of some new property to cost nearly $13,000,000. This property consisted of 100,000 kilowatts of additional steam generating capacity to cost $103 a kilowatt, and some transmission and substation equipment. These bonds will be well backed by property with a comfortable margin to spare, as long as depreciation is properly provided for—and the property is valued at historic cost less depreciation. But suppose it is to be valued on the basis of reproduction value and the price and wage levels drop 25 per cent. Our margin of property protection has evaporated.

Of course, the stockholder can afford to take a different point of view. If he stands to lose from a falling price level he also stands to gain from a rising one. But no matter how high the company's profits may soar, the bondholder will collect only 3½ per cent on his original investment. To tie the rate base to a fluctuating price level is equivalent to saying to him, heads I win, tails you lose. Certainly the tendency to base utility valuations upon historic cost, exhibited in New York, Wisconsin, and elsewhere, has much to recommend it to the long-term institutional investor.

IF the analyst can obtain a recently made commission valuation of a utility's property his problem is of course largely solved. We must, however, devote our attention mainly to the ninety and nine cases where no such valuation exists. If a breakdown of the original historic cost of a utility's property can be obtained, the problem of arriving at a conservative valuation is greatly simplified. Each item may then be checked for its reasonableness, and roughly adequate depreciation may be deducted. Take a particular case which, although hypothetical, is closely enough in line with reality to be of some practical interest. An electric utility has a property book value of $50,000,000 against which it has accumulated a retirement reserve of $4,000,000. Its debt consists of a single $28,000,000 issue of 4 per cent first mortgage bonds. Superficially its bonds would seem to be well secured by property, but let us look closer. The total historic cost of its property was $39,000,000. The first item consists of 30,000 kilowatts of hydro capacity which cost $300 per kilowatt to build early in the present century.

This plant may be in as good condition as ever, but to yield 5 per cent on its historic cost it must sell its output at an average rate of 9 mills. If it

were to sell this power at 5 mills—about the overall cost of power generated in a modern steam plant—it could support a value of only $167 per kilowatt, and this is the value which we shall prefer to allow. The company also owns 40,000 kilowatts of steam capacity having an average historic cost of $130 per kilowatt. Of this 30,000 kilowatts is in a 6-year-old plant to which a depreciated value of $100 per kilowatt may be assigned. The balance is in old plants built before 1920 and is now used only for standby purposes. A depreciated value of $40 per kilowatt would seem to be giving it the benefit of the doubt. The transmission and substation property seems to have been built for a reasonable unit cost for the type of construction involved. Since the distribution property is carried at only $100 per customer we may probably accept that figure. However, the transmission, substation, and distribution properties are not all new and we can hardly value them now at their original cost. Assuming them to be in 85 per cent condition would require a deduction of 15 per cent from this cost for depreciation. The general property may be treated likewise. By this rough and ready process a valuation for the property of $29,480,000 is obtained.

Do not misunderstand—this value does not necessarily represent our idea of a fair rate base. It does represent a rock bottom valuation below which we could not imagine a regulatory body going in arriving at a rate base or in establishing a value for condemnation purposes. It is an ultraconservative figure, but in view of the present chaotic state of utility valuation who shall blame the investor for playing safe?

In the numerous cases where no such breakdown of the historic cost of a property is available, the analyst is frequently forced to resort to still more empirical methods of valuation. In such cases conservative unit values may be assigned to the various property items. A new steam plant might be valued at $100 per kilowatt of capacity. Transmission lines may be valued at various amounts per mile of line depending upon voltages and type of construction. Of course utility valuations obtained in this way are subject to large percentage errors, but often the investor has no alternative solution to his problem. He can always be conservative in his assumptions.

Coexistent with the knotty problem of valuation is the rate of return which utilities may safely expect to be

TABLE II

PROPERTY VALUATION OF HYPOTHETICAL UTILITY

	Historic Cost Undepreciated	*Rock Bottom Valuation*
Hydro Generating Capacity	$9,000,000	$5,000,000
Steam Generating Capacity	5,200,000	3,400,000
Transmission Lines	8,000,000	6,800,000
Substations	4,500,000	3,825,000
Distribution System	8,800,000	7,480,000
General Property	3,500,000	2,975,000
Total	39,000,000	29,480,000

allowed to earn in the future. At present the most widely accepted rate appears to be 6 per cent. However there is nothing sacrosanct about this 6 per cent figure, for in the not distant past rates of 8 per cent or even higher were considered permissible, especially in such states as Texas where interest rates tend to be higher than average.

IT is doubtless true that at the present time a good many electric utilities are earning well over 6 per cent on a fair valuation of their property. The rate of return allowable in the future will no doubt depend on a number of factors. Of great importance is the prevailing rate of interest on high grade securities. At a time when many utilities were forced to pay up to 7 per cent on their bonds and preferred stock, when even the highest grade utility bonds paid 5 per cent, and when a coupon rate below 4½ per cent was practically unheard of, a rate of return on a utility property of 6 per cent seemed modest enough. But at a time when a great many utilities have been able to borrow a great deal of their capital at 3½ per cent or even less, a return of 5 per cent appears equally reasonable. The fact that the United States has become a creditor nation and that a large part of its physical development has been completed probably means that interest rates will in the future be materially lower in this country than in former times.

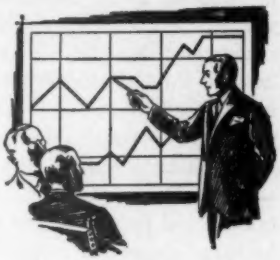
Another point to be considered is that most utilities are now large well-established concerns as compared to the small pioneering enterprises of former days. They are therefore able to raise capital at a much lower rate. This circumstance has already been noted by some state commissions in passing on the reasonableness of the rate of earnings of utilities under their jurisdiction, and in one case a rate as low as 5.2 per cent was established as reasonable. Taking all of these circumstances into consideration it would be a bold investor who would definitely count on the utilities being allowed to earn a rate of return of over 5 per cent in the future. The ultraconservative person would probably set a still lower figure.

MOREOVER the strict regulation, which is likely to be the price of survival of the private utilities, will probably hold them much more strictly to the allowed rate of return than has been done in the past. Applying then a 5 per cent rate to the $29,480,000 valuation of our hypothetical utility, we arrive at a minimum allowable annual return of $1,474,000. This is equal to 1.31 times the required interest on the bonds. These bonds may therefore be considered reasonably well secured, although they cannot be regarded as above secondary quality.

There is one matter with respect to which the increasing strictness of public regulation serves to protect the investor. That matter is depreciation. Scan the income accounts for the past half dozen years of a good many utilities and note the sharp rise in the allowance for depreciation and property retirement within that period. Some utility men freely admit that in prior years many utilities were paying out in stock dividends money which should have been retained in retirement reserves. These utilities were playing the old railroad game of paying out in stock dividends funds which

Effect of Regulation and Competition

"WHILE closer regulation may appear to hurt the investor by restricting earnings, it already has shown signs of strengthening his position by requiring an adequate depreciation policy... Even in those cases which are threatened with direct public competition the outlook does not appear as hopeless as certain market quotations would indicate. No operating utility bond has ever defaulted because of such competition in the past."



might have been used to increase or at least maintain the security behind the bonds. The improvement in the record may be in part due to a change of heart on the part of the utilities themselves, but it must be partly attributed to a stiffening in the attitude of the regulatory bodies. This improvement in the provision being made for depreciation and obsolescence by many utilities greatly improves the outlook for the utility investor. It is to be hoped that those utilities which are still open to criticism in this respect will soon see the light.

Closely allied to the subject of depreciation and obsolescence is the matter of debt retirement. Recent utility bond issues containing mandatory sinking-fund provisions have been few and far between. It is true that a great many issues contain a provision by which certain specified amounts must be spent for net additions to property or for debt retirement. However, as long as some utilities continue to carry in their property accounts property items which have experienced the end of their usefulness, such provisions provide doubtful protection. In such cases property items which from a service point of view are really replacements are treated as net additions to property. While mandatory sinking funds may seem out of place in connection with a rapidly growing industry, are they really so unreasonable? They do provide a hedge against that great imponderable, obsolescence, and against that inevitable day when the industry will have passed its zenith and has entered upon the downward slope which all other industries which have gone before have encountered. When the utilities need more money they can always present their case to the investor anew, a procedure which has its points. While in the sellers' market which has recently existed, the utilities have been able to avoid the insertion of such sinking-fund provisions in their bonds, a good many investors hope that the worm will soon turn. After all, sound finance is largely a matter of proper provision for debt retirement.

PASSING on to another possibility, what if the utilities shall not be left to occupy their field undisturbed? What if they be taken over by public

authorities or if they suffer competition at the hands of such authorities? Of these two alternatives the former is infinitely to be preferred by the investor. In such case the investor may reasonably hope that a fair price will be paid for the property, so that if his investment has been conservatively made and his securities are fully backed by property he may expect to come out whole. Perhaps his bonds will be guaranteed by the public authority or he may be paid off in cash. In facing this eventuality it behooves the investor to see to it that his bonds are backed by tangible property on a conservative basis of valuation. A high rate of current earnings in this case can hardly provide a substitute for property backing.

Finally let us consider the darkest possibility threatening the utilities, the possibility of direct public competition. This possibility threatens to become a reality in certain sections of the country. How is the investor likely to fare if it materializes? Is he likely to be wiped out entirely, and if not, to what extent is his position likely to deteriorate? It is not likely that these questions can be satisfactorily answered by any amount of theorizing. Fortunately the investor may have recourse to practical instances.

In a middle western industrial city a private utility serves about 40 per cent of the domestic customers, the majority of the commercial customers, and nearly all of the industrial customers. It also serves a handful of small communities thereabout, but the great bulk of its business is done in the central city. The remaining customers in this city are served by an aggressive municipally owned system. Domestic and commercial rates charged are the lowest in the state and industrial rates are not above average. At the same time the privately owned system has been able to earn right along a return on its electrical investment which is certainly in excess of 6 per cent.

PROBABLY the closest historical analogy to the situation now facing certain private utilities in the Tennessee valley and elsewhere is that faced about twenty years ago by the private electric company serving Ottawa, Canada. This story is worth telling in some detail because it illustrates the ability of an electric utility to survive and prosper under conditions which might have been regarded as rather hopeless. At the time the Ontario Hydro-Electric Commission was spreading its lines over Ontario there was only one private utility which decided to stay and compete, rather than sell out. This was the Ottawa Electric Company. Firmly entrenched in its territory, and drawing the bulk of its power from the dark waters of the Ottawa river which surge through its old stone power houses, it was in a position to resist. As a preliminary it dropped its rates to rock bottom, to a

MONTHLY DOMESTIC BILLS

	100 kw. hr.	*250 kw. hr.*	*500 kw. hr.*
TVA rates	$2.50	$5.00	$6.90
Ottawa electric rates	1.74	2.80	3.92

¶ "In *order to justify the investment of policyholders' funds in utility securities at all it is necessary to have faith that public authority will not be used ultimately to destroy the value of any such investments as are conservatively backed by used and useful property. If such destruction finally does take place the responsibility must rest elsewhere than on the fiduciary institution which was merely acting as trustee.*"

level considerably below the much publicized TVA rates and of course Hydro had to follow suit. The struggle was on.

What has been the result after twenty years? At the end of 1935 Ottawa Electric had 22,585 domestic and 4,928 commercial customers. Hydro had 13,123 domestic and 1,567 commercial customers. In 1935 the private electric company produced earnings after depreciation of over 9 per cent on the depreciated book value of its property. It is on the most friendly terms with its publicly owned competitor. A high official of a large private power company living in Ottawa told the writer that his own home was served by the publicly owned system and he saw no reason to change over as neither system desired to attract the other's established business.

Such is the record of how two private electric utilities have been affected by publicly owned competition. What conclusions may the investor draw from the evidence? Certainly not that the public competition may be ignored. It is bound to make some inroads on the private company's business. Theoretically it may destroy it. Certainly it will tend to force down rates, particularly domestic rates. However there are two compensating factors working on the side of the private company; one is the growth of the territory, and the other is the growth and vitality of the electric business. Certainly the investor in a growing enterprise, with great possibilities for expansion still ahead, which is able to sell its product on a remunerative basis is in a vastly better position than the investor in a static or declining business which has difficulty in selling its product or service on terms which enable it to live.

Such is the advantage of the investor in electric utilities over the investor in many railroad securities. It is a very great advantage which helps to outweigh much that is unfavorable in the utility outlook. It therefore appears unlikely that public competition will spell immediate ruin for the investor in a private electric utility if that utility is conservatively capitalized and its securities are well backed by used and useful property. Of course a strong bond may deteriorate and a weak one be pushed onto the default list. After a period of readjustment a new *status quo* will probably be established after the heat of the battle between rival ideologies has died away.

One interesting by-product may be derived from the above discussion. At the end of 1935 there were

only about 7,500 domestic gas customers in Ottawa and vicinity as against 35,668 domestic electric customers. The number of gas customers is decreasing and just about the only people who now use gas are those who cannot afford the initial cost of all electric equipment. In the middle western city alluded to the gas company is also reported to be experiencing hard sledding. The inference is that where an artificial gas company serves a territory where competition exists between public and private electric systems, the gas company and not the private electric company is likely to be the chief sufferer.

There is one other train of thought which may occur to the investor. The mortgage bonds of Tennessee Electric Power have recently been selling to yield as much as 8 per cent while bonds of no greater intrinsic merit but more fortunately situated have been selling to yield less than half that rate. Supposing that the worst comes to the worst, that a publicly owned power system largely financed by Federal funds seriously undermines the earnings protection of the Tennessee bonds, at the same time bringing very low electric rates to the territory. Is there even a reasonable chance that such competition will be confined within certain restricted areas? Won't the people of other areas demand similar rates and won't they employ the same means of getting them? Will not there be a demand that such Federal expenditures be equalized with respect to all parts of the country? Already such a threat is taking shape in the form of a number of proposed Federal power authorities to embrace all parts of the country. What chance therefore has the utility investor to obtain ultimate safety by flight from certain immediately threatened areas. Such a flight is likely to be an unending process and is likely to be accompanied by successive capital losses. If there is any validity to this line of reasoning the Tennessee Electric Power bonds, selling to yield 8 per cent, represent better value than a lot of other electric bonds selling to yield less than 4 per cent. In order to justify the investment of policyholders' funds in utility securities at all it is necessary to have faith that public authority will not be used ultimately to destroy the value of any such investments as are conservatively backed by used and useful property. If such destruction finally does take place the responsibility must rest elsewhere than on the fiduciary institution which was merely acting as trustee.

LET us restate in brief the gist of the foregoing discussion. In the first place we have good reason to believe that a large part of the ownership of our utilities ultimately vests in the great American middle class. Indeed, there must be few forms of wealth in this country the ownership of which is more widely diffused. Up to the present the position of the investor in the senior securities of utilities other than electric railways has been a very happy one. However, the future seems to call for greater discrimination than has been necessary in the past. Closer regulation of the utilities appears inevitable and earnings are likely to be restricted more and more closely to a reasonable return upon the property. Under these circumstances the strongest peg upon which to hang the security of a utility investment appears to be a conservative

valuation of the property, preferably on the basis of historic cost less depreciation.

While closer regulation may appear to hurt the investor by restricting earnings, it already has shown signs of strengthening his position by requiring an adequate depreciation policy. If some utilities should in the future be taken over by public authorities, adequate property backing should protect the investor therein. Even in those cases which are threatened with direct public competition the outlook does not appear as hopeless as certain market quotations would indicate. No operating utility bond has ever defaulted because of such competition in the past.

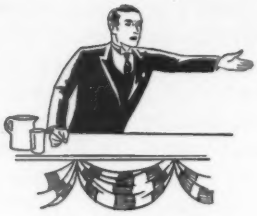
To those who take a pessimistic view of utility securities we may ask the question, "Where is there a better field for the investment of trust funds?" The railroads perhaps? At the present time a considerable proportion of our railroad mileage is bankrupt, while considerable of the remainder barely escaped receivership. The next depression will probably see more railroad bankruptcies, for the rails depend heavily on heavy industry and are closely bound to the business cycle. During the depression their gross fell off half as compared with the modest decline of less than 12 per cent suffered by the electric utilities. Then there are the labor cloud and the limited possibilities for growth. Remember that railroad gross revenue reached its peak in 1926. Of course diversification will almost demand that the institutional investor carry some rail bonds in his portfolio, but these must be selected with care. One large life insurance company feels that there are only fifteen railroads in the country which have strong enough credits to merit the investment of its funds therein.

What about industrial securities? The answer is that there are few high grade industrial bonds available. There is a considerable range of industrial preferred stocks outstanding, but most industrial financing has been done through common stock issues. These are not generally regarded as a suitable medium for the investment of trust funds. Most industries suffer violent fluctuations in the business cycle.

Among the various classes of corporate securities, the senior securities of our utilities still appear to possess unusual features of strength. They are backed by a rapidly growing industry which still seems to possess extraordinary probabilities of future growth. They render a service which will continue essential barring some truly revolutionary scientific discovery. They are most unusually free from violent fluctuations in earnings caused by changes in the business cycle. Serious threats exist, but they are not in the sphere of fundamental economics. Where can trust funds be more safely stored? To those who still look askance at utility securities we can only say, if you know of a better 'ole go to it.

¶ "Too *many reports and investigations in modern times begin with a big wash and end with a little hangout.*"

—JOHN T. MADDEN
Professor of Accounting, New York School of Commerce.



Strikers, Let Utilities Alone

The public, in the opinion of the author, will not long stand for the loss and inconvenience which would result from the stoppage of essential utility service.

By CARLISLE BARGERON

Shortly after the World War labor went on a rampage suggestive of, but not as serious as, what is happening today. It had extended so far that even newspapermen were attempting in several places to set up guilds. Then came the great Boston police and firemen's strike. A public that had been tolerant, if not sympathetic, changed in its sentiment almost overnight. This was going too far. The police and firemen served the public in an indispensable way.

Who the strong man was who rose to the occasion and gave short shrift to this Boston walk-out has been questioned; but Calvin Coolidge got credit and it catapulted him into the vice presidency whence he later stepped into the presidency with the reputation of being a strong, silent man.

In 1922 the railway shopmen of the country went on strike. The government stepped in promptly. Attorney General Harry M. Daugherty went to Chicago and, from a friendly Federal judge, obtained one of the most drastic injunctions ever issued in a countrywide labor dispute in this country. It recognized the right of the shopmen to strike but that was about all. The efforts of the railroads to operate could not in any other way be interfered with. This writer, at the time, considered it manifestly unfair to the strikers and it unquestionably caused them to lose the strike. But the point of this article is that it was widely applauded and was criticized in only a few quarters.

To this day, the general public remembers Grover Cleveland as the man who broke the celebrated Pullman strike of his day, and recalls him favorably in that light.

Governor Frank Murphy of Michigan is friendly to organized labor. He pledged himself to further its aims and there can be no doubt but that he has done everything within his power to fulfil that pledge. His attitude is considered, more than anything else, to have been responsible for the union's victories in the General Motors and Chrysler automobile plants. Then strikes began all over his state, in ho-

tels, in restaurants. Through it all, although his friendliness towards labor was being sorely pressed, he exhibited an amazing tolerance.

THERE developed then, in the zeal of labor, strikes in the electric power plants in three cities of Michigan—Bay City, Lansing, and Flint. The governor blinked. Hospitals were without light or fuel. The three industrial cities were at a standstill. Not only were the people inconvenienced but their health and lives were endangered. Hundreds of thousands of people were left groping in the darkness. Industry was at a standstill. Labor was effectively showing its strength. But did it do labor any good? Did a public that had been sitting around partly cheering labor's "onward march" and even condoning the sit-down strikes now cheer and say: "Hurray, the workers have got 'em."

The public did not. Over all the country went the stories of indescribable situations, inconveniences, stark terror. The governor moved; the state moved and the strike was settled quickly. It was settled so quickly that it was quickly forgotten. Labor's so-called onward march thus suffered only a little in public esteem.

But a few weeks later the switches were pulled again. This time it registered fully on the public mind. John L. Lewis, head of the C. I. O., and other C. I. O. officials in Washington sought vainly to head it off. Power company officials were in Washington conferring with them. As late as 6 o'clock of an evening Lewis and his colleagues were insisting that the switches would not be pulled at midnight as had been planned. All difficulties, it was said, were in the process of being ironed out and there would unquestionably be an agreement before the scheduled hour. But elements in Michigan were determined to pull those switches at midnight; and pull them they did. Governor Murphy, out of the state, promptly turned homeward and announced as he did so that the power had better be turned on and turned on quickly. He was prepared, he declared, to tolerate no more nonsense. The electricity was turned on in a relatively brief time and John L. Lewis heaved a sigh of relief.

BY coincidence or otherwise this incident was the high point in labor's so-called onward march of early 1937. It soured the labor-friendly governor; it soured the public. The governor has since not had so much trouble with labor, he has declared, as he has had in holding in check the "forces of reaction." In attempting that the governor must certainly have had a lot of trouble. So insistent were these "forces of reaction" that the legislature passed a most drastic antilabor law, so drastic that he would not sign it. A more modified measure—decidedly antilabor in the opinion of the C. I. O.—was later enacted. So it appears that labor was "onward marching" right well until it got to fooling with public utilities. Since that time, in so far as Michigan is concerned, it has had to devote its energy not to "onward marching" but to resisting what it calls the "forces of reaction."

Governor Murphy has said that only a small percentage of the electric plant workers were members of the C. I. O.; and the C. I. O. officials have explained

privately to newspaper friends that most of these members were Communists. The C. I. O. officials were unquestionably embarrassed. There are stories in Washington labor circles —approximately authentic—that the pulling of switches in Michigan was intended to be a signal for a nation-wide pulling of switches. It didn't work. The common sense of labor leaders and of the workers prevailed.

ONE of the quickest ways to effect a revolution in this country would be to seize and pull the power switches. An insignificantly small force brought about the revolution in Russia by seizing the lines of communication, the telegraph and telephone services. But the history of labor in this country has been that its "onward marching" has been abruptly checked wherever it has attempted to fool with the country's indispensable services—such as those of the great public utilities.

We are a funny people. We have our moods. At times we go overboard in our feelings for the employer or for industry. We give them full unhampered play. Then, all of a sudden, after such an experience as we had in 1929, we become introspective. We want to punish ourselves. Our hearts bleed for that well-known fellow, the Underdog. Then the labor leaders have their inning. We sit by and cheer them. We glorify them. We reach the nonsensical conclusions that our business and industrial leaders are irresponsible; that the fellows who are really smart and in whom we can impose complete trust are the labor leaders whether those leaders are political or professional.

Then this crowd, getting out of bounds, turns off our lights one night, ties up the train on which we want to ride, and the public stake in these controversies is brought home to us.

THE big labor leaders recognize the interest of the public in public welfare and convenience. Talking with them privately in Washington, this writer is satisfied that the power plant strikes in Michigan were beyond the C. I. O.'s control. The leaders of the railroad brotherhoods, the so-called Big Four, notwithstanding their periodical appearance of belligerency, have no desire to strike. Of course, a mediation system has been set up for the latter which, while not denying the right to strike, makes it impracticable. That or some similar form of compulsory arbitration may well be the final solution for all labor disputes in public

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utility industries. The public may demand it.

This brings us to the obvious truth that the utility worker is "on the spot," as compared with other workers, when it comes to liberty of action in enforcing his labor demands. Why can't he take part in these great proletarian movements? He must at times feel the restlessness of other workers. Are the labor leaders, the public, and the government all against him? The answer is that they certainly are or will be if he ever tries to tie up the vital services of any great metropolitan center. It is not a question of the merits of the dispute between the company and its employees. It is a question of "public health, safety, and morals"—as the lawyers say.

The utility worker under present laws has as much right to strike as has anyone else. But just let him try it! If labor leaders want to see vigilant committees organized spontaneously and quickly, just let utility workers pull a "sit-down" in a power or gas plant.

THE utility workers, however, are no worse off in respect to the public interest in their work than are the owners of the business. Because of this interest the investors in public utilities are subjected to more rigid regulation by the government than are the investors in other business enterprises. The owners of public utilities cannot pick or choose their customers, as can the owners of other business; nor can the public utility owners charge what they please for their service. The government fixes utility rates and limits profits. It does not fix prices in other lines of business.

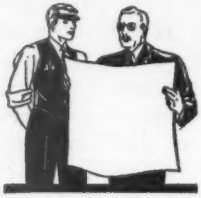
The utility owners invest in utilities with the knowledge that the public interest in the business is so special and great that the public can and will regulate that business. So the owners do not have the same freedom that the owners in other kinds of business have.

Public utility labor has not yet been subjected to government restraints. But it can be and will be if labor leaders go too far and tie up the utilities by strikes which bring widespread loss and inconvenience to the public. The public interest in strikes in most lines of business is indirect and not immediately seen. In the utility business the interest is direct and perceived at once.

Up to date there has been little cause for strikes in the utility industry. The industry has been relatively undisturbed by labor trouble. The problem of labor has not been one of its major worries. Its major troubles have been with the politicians. Its wages and general labor policies have generally been above the average; and few industries, indeed, have offered greater opportunity to the white collar class.

ONE source of danger to the progress of the union labor movement is the knowledge gained from recent controversies, that a relatively small group of employees can tie up a mass production industry throwing thousands out of work, coupled with the apparent lack of power of representative leaders to control the action of such irresponsible groups.

Now, it might happen that some of the leaders of subordinate irresponsible groups, having observed their power to tie up mass production industries, might decide to try their



Labor's Biggest Problem Today

"LABOR'S biggest problem today is to hold its gains against the country's change of sentiment, against its present lack of sympathy. It might quickly lose public support if it fools too much with the public utilities. The fact is that the turning point in public sympathy for union labor came about the time of the strikes in the Michigan power plants."

hands on public utilities with the same "public be damned" attitude which was once charged against the owners of the railroads.

At present the indications seem to be in the opposite direction. The union labor leaders are developing a revived respect for public opinion; a humbler attitude is taking the place of their grandiose bid for power. Mr. Lewis has made a lot of noise. He has boasted and he has strutted and he has made the hair of many people stand on end. But at this writing he only claims some 3,000,000 members and when he comes to checking up on how many he actually collects dues from, the count will be considerably less. Assuming he has 3,000,000 though. This added to the 3,000,000 or so of the American Federation of Labor totals only 6,000,000 workers of a potential 38,000,000 or so wage earners in this country. There is a serious question as to whether the current labor movement will get much farther.

THE public has become aroused over labor's excesses. Vigilante movements have sprung up in Michigan, in Ohio, to a lesser extent in Pennsylvania. The old wave of what labor sarcastically calls the "forces of reaction" is indisputably setting in. The friendly labor governments and labor itself have had to divert some of their energies to combatting these forces. In the minds of many Washington observers the country's next problem will be to hold these forces in check, to keep the pendulum from swinging back too far. It is natural. As stated before, we move in cycles. The point for immediate consideration is that labor, instead of extending much further, has to fight to hold its own.

Already there are demands, vociferous demands, for government regulation of labor. William Green, president of the American Federation of Labor, despising the C. I. O., has told this writer that one of his greatest jobs

today is the warding off of unfriendly labor legislation.

Then there is government domination of labor that the new captains of labor must consider. Government has already moved into the regulation of business and industry in full force. It was many years ago that the right of government was established to regulate the utilities—those industries directly charged with a public interest. Now the battle has moved on. Utilities are charged with defending straight out government ownership, while to business and industry generally is left the task of fighting government control. It may be that in this respect also the leftward swing of the politico-economic pendulum has about reached its extreme point. But assume for argument that it has not. Assume that the government is definitely on the way to control all of our industrial and business activities and that labor continues on the "onward march."

IN this event government control of labor is inescapable. Such ardent friends of labor as Senators Robert L. Wagner and Robert M. LaFollette freely admit this. In fact, just such a situation as this—government control of industry and labor—is, in their long range view, what they would call an ideal of government. Their only objection to government control of labor now is that it is not yet fully organized. Industry, as they see it, is.

Six million organized workers out of a potential 38,000,000 is, Senator Wagner has told this writer, nothing to be alarmed about. But it would seem to be of importance to labor that its friend visualize the day when it along with everything else will be under government control. The only difference between the friends and the enemies of union labor, so to speak, is that the latter are clamoring for government control now.

Messrs. Lewis and Green, you can rest assured, are not looking as far ahead as such "friends" of labor as Messrs. Wagner and LaFollette. They do not anticipate any government control of labor. They are out to get members and are playing along with labor's "friends" to that extent. They have encouraged the New Deal in its efforts to reach further into the field of control over business and industry, and even agriculture, as a matter of playing ball. They do not realize that they may have to swallow the same medicine they are helping the government to dose industry. They don't look to the day when they will have so many members that the government will have to control them. When the government sets up minimum wages, regulation of hours, and the like, there won't be much need for their jobs. But the brute truth is that they don't expect to get that many members.

The threat of organization has gotten the wage earner much farther than actual unionization.

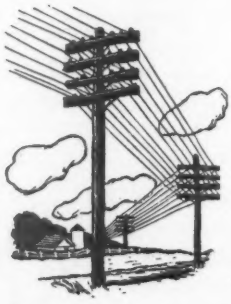
Naturally, there must be some organization before this threat of organization carries any force. The answer is moderation. A 100 per cent organization of the wage earners of this country will not carry them as far as the part organization has carried them in the past.

IT was a conception of the old NRA that all industry would be organized on the one hand, and all labor organized on the other. The two groups

would then negotiate with one another through their representatives here in Washington. That situation may come about. Certainly the trend since March 4, 1933, has been in that direction. I can't imagine a more intolerable state in which to live, a more intolerable state for labor, a more intolerable state for industry.

But the counter forces already setting in raise doubts about the realization of this objective. Returning prosperity brings a confidence on the part of the people, on the part of labor, on the part of industry. It is a fact that unionization efforts are under their greatest handicap when the dinner pail is filled. Agitators can be bought for a dollar a dozen then.

We are at present returning to that state. Labor's biggest problem today is to hold its gains against the country's change of sentiment, against its present lack of sympathy. It might quickly lose public support if it fools too much with the public utilities. The fact is that the turning point in public sympathy for union labor came about the time of the strikes in the Michigan power plants. That is the way to test a community of strike lovers. Turn off their lights, their gas, or their water. They will get indignant and denounce the strikers every time.



Public Service a la Don Quixote

ERNIE Pyle, who writes a travel column for the *Washington* (D. C.) *Daily News,* has come across a strange home generating plant on the farm of H. J. Dehlinger, just outside of Buffalo, S. D. It is a windmill made out of an airplane propeller hooked up to a generator which, in turn, charges a set of batteries.

It takes a 7-mile wind to start this mill charging, but the winds in that section are blowing so steadily and vigorously, that there is scarcely ever a calm during the day. In fact, Dehlinger had to put a governor on the mill to limit its revolutions to 250 a minute so it won't fly to pieces in a gale. From this windmill plant (which is said to be one of but three in the country), Dehlinger gets light, water pumping, refrigerator, radio, and laundry appliance service. It cost about $500, but the upkeep is negligible. Unfortunately, it could not be used in less windy environs.

Another strange angle of the situation is that Dehlinger's son works in the town's municipal light plant, but one can hardly blame the family for passing up the central station service, because, according to Ernie Pyle, "The rate paid by Buffalo citizens is 20 cents a kilowatt hour." If that's not the tops for this country, it must be pretty near it.

Letter to a Utility President

Thoughts of a friendly outsider on company relations with its customers

By RALPH B. COONEY

Your challenge is an interesting one—and fair. It is true that I have been having my say about the importance of utility men becoming public leaders. And it is equally true that I haven't presented any particular plan whereby that end might be achieved.

You will understand, of course, that I, as an outsider, have ventured to talk so freely about your business for just one reason—your business is everybody's business. Whether you like it or not, yours is a public responsibility. You must, therefore, expect individual members of the public—like myself—to express all sorts of opinions on matters, which in other types of business enterprise, would remain subjects of your own private concern.

I have simply been urging utility executives to face this fact, accept its implications, and act like men who understand both the obligations and opportunities of public responsibility. As one of the public I feel that I have the right to do this. But when it comes to telling experienced business leaders just what to do—and how to do it—I must admit to a considerable diffidence. After all, I wear no professorial robe.

Naturally, I have ideas on the subject. You have been good enough to ask what they might be, and I am more than pleased to pass them on to you. They are neither clever nor complicated—but they do call for a generous expenditure of time, thought, and energy. And they do represent a definite departure from the conventional type of public relations program.

The extent of this departure lies in the distinction between the word *leadership* and the word *relations*. The objective of the typical public relations program is the creation of a vague cushion of uncritical friendliness and good will which it is hoped will ease the utility company's way when the going gets rough. The objective of the public leadership program is the creation of a respect for the man-power at the head of a utility sufficiently

strong to assure active community support under all circumstances.

The former is preferred by most business executives because the necessary work can be accomplished by professionals hired for the job. It leaves the big shots free to run the business—and since they are business men they figure that's what they ought to be doing.

BUT where a business has come to assume a vast public responsibility, something more than vague friendliness is necessary if its place in the economic and social order is to be maintained. It must command respect. And that takes public leadership.

Which brings me to my first piece of specific advice.

The "public leadership" job must be assumed by a major company executive—preferably by the man who stands as his organization's president. If this is impossible, it should be assigned to another executive, definitely identified as one of major importance and known for his participation in the formulation of the company's policies.

It should NOT be given to anyone bearing the title of Public Relations Director.

I say this so positively because this title has become too closely associated with mere good-fellowship. The work to be undertaken under a sincere public leadership program cannot be accomplished through mere golf-playing, hand-shaking, luncheon-giving, and club-joining. It must involve a thorough research job into the social structure of the communities involved; it must represent a complete familiarity with the public's attitude towards the utility company and the things it stands for; it must produce company policies reflecting an understanding of the public welfare, and it must demonstrate all this interest in a human embodiment who will symbolize the company to all within its sphere of influence.

TO command respect outside the company, our man must be known to possess authority within the company.

To simplify this letter, let us assume that you are accepting this responsibility for yourself. You have come to feel that it is the most important job you can be doing, and you have turned over your routine executive duties to your associates. Where shall you start?

As I see it, you must begin with a vigorous program of self-education.

Now—you doubtless have in your files—and, for that matter, in your head—a great assortment of information about the half-a-state which your company serves. You must know a great deal about the economic conditions prevailing in your territory. You have charts and graphs and reports covering the many factors which influence the volume and character of the business you are doing.

But, for all this, I wonder how well you know your region as a living cross-section of the national scene. How carefully have you traveled over this area you serve? How many of its towns and villages and farms and forests have you seen with your own eyes? How many of its people have you seen in the flesh? Are their spirits low or high? What are they seeking for their communities? What are they seeking for themselves?

SUPPOSE, for a little while, that you forget that this is a territory served by your utility company. Think of yourself as an investigator charged with the responsibility of learning all about a strange part of the country—finding out not only what it is like but also what makes it that way.

Approached in this spirit, several primary steps come to mind. First, you will probably start studying your maps of the region — looking with fresh eyes at the geography, at the relation of cities to towns, at the influences exerted by rivers and hills and other physical conditions. Second, you will want to turn to your history books. Your region is what it is—partly because of its geography and partly because of its history. Refresh your mind on the nation's history—then turn to a couple of state and local histories; you will find many things that throw interesting and informative side lights on current situations. Third, give some time to the reports of various governmental agencies which show economic, industrial, agricultural, and population conditions as they exist in your region. Today, the best compendiums of this information are to be found, helpfully correlated, in the reports of the state planning boards.

With all this behind you, devote yourself to an intensive study of the newspapers published in the section. Read the big-town papers and the small-town papers. Read the local news, the editorials, and the advertisements. Particularly the advertisements —for they reflect local needs and standards of living more accurately than any other material appearing in the press.

AND then—bring the whole picture to life by going out and seeing it for yourself. First, however, take the time to read—or reread *Middletown* and *Middletown in Transition* by the Lynds. Do this for just one reason—to remind yourself just how much material familiar places can yield to the truly inquiring mind.

Start out by chartering a plane and flying over the region — back and forth, up and down. Make the map itself come true. With that picture fresh in your mind, come down to earth and hit the highway!

Tour the back roads as well as the main thoroughfares, stop at tourist homes and cabin camps as well as at the hotels to which you are accustomed, pause to talk to small-town store keepers and lunch-room proprietors. Visit the bankers and the key business men, of course, but give some time to the little fellows, too. Drop in to neighborhood movie houses and drug stores, loiter in the big department stores, and observe what people are buying. Visit factories, see yourself

¶ *" . . . the evidence is clear that when business leaders—like, for example, Owen D. Young and the late E. A. Filene—have ventured into the public eye with opinions concerning the public interest their views have been met with practically universal respect, even when their ideas have been far in advance of the times."*

how the community's industrial life is moving. Ride busses and street cars.

Watch building activity. Spend some time out on the edge of the towns where the new houses are going up. See what standards of living they reflect. Mix with the prospects who come to look them over.

Visit county fairs, community reunions, baseball games, and as many other popular gatherings as you can. Observe the public's capacity to have a good time. If your company goes in for exhibits at local celebrations (and it should) hang around your own booth. You may learn little things of more than passing interest.

In short—compress as much of the living that is going on in your region into your own personality as is humanly possible.

As I read back over what I have just written, I find myself picturing your reactions to these suggestions. I think I hear you saying "But this is a job for a research man or one of those public relations fellows. This will take weeks of time—and I'll end up with a lot of information I could get just as easily from a good assistant."

One answer that I could make would be "Well, have you ever thought of even having a good assistant do just this job?"

A good assistant could do a great deal of this work—provided that your imagination and his reportorial ability were equal to the task of creating in your mind a picture vibrant with life.

But I feel that I must again repeat that yours is a business of the people —touching their welfare to an extensive and intimate degree — and that your company's existence as a private enterprise depends, in the long run, upon your ability to gain and retain the people's confidence. Since the retention of that confidence will, sooner or later, come to depend upon a display of public leadership upon the part of yourself, you must place foremost among your responsibilities the acquisition of a thorough understanding of the people you hope to influence. That, I submit, can be obtained only by a complete and detailed acquaintanceship with the facts which determine their outlook and opinions.

However, it *is* a good idea to assign a capable assistant to this work. It will be a continuing activity, and you cannot keep on depending upon the facts gleaned from one initial survey. You must keep up to date at all times, and you would be wise to have a man constantly in the field, charged with the sole responsibility of keeping you informed on general conditions throughout your territory.

But that's looking ahead a bit. Your first job is to get the basic picture established in your consciousness.

Let's assume that you've gone ahead and done just that. You've got the feel of the section in your bones, so to speak. You know something of what your public feels about things. You know what some of its problems are. You are now ready to find out where and how you can most effectively enter upon the stage of public interest.

The answers to these questions must rest upon a thoughtful analysis of what all this information means. You have gathered together a vast assortment of facts, impressions, and ideas.

Time for Public Leadership

"To have genuine value, a program aimed at the establishment of public leadership must not be deferred until the moment when controversy muddies the waters. It should be instituted and developed while the coast is clear and the sun is shining. It should be keyed upon a declaration of responsibilities and not a defense of privileges. It should look ahead. It should embody concrete proposals. It should be candid."

How do they fit together? What's right with the picture and what's wrong? Where lies its strength? Where its weakness?

You will find answers to these questions gradually taking form in your mind. Crystallize them into clear statements of belief. Write a platform directed at improving the general welfare of your territory. Determine the stand which you as an individual feel you should take upon the questions which in your mind are of vital importance to your communities.

Nor does it matter what stand you take—so long as it does not represent a greedy pursuit of mere commercial advantage—and so long as it is based upon facts honestly stated and rings of sincerity. The things you decide to stand for may concern matters already agitating the public mind—they may, on the other hand, relate to questions not as yet recognized as affecting the general interest. You may stand for causes receiving general public approval, or you may take the side of a minority. If you are frank and sincere, if you stand by your guns, if your knowledge is sure, neither you nor your company will suffer.

One reason business leadership is at so low an ebb in the eyes of the public is found in the business man's fear of openly taking sides on public questions. Yet the evidence is clear that when business leaders — like, for example, Owen D. Young and the late E. A. Filene—have ventured into the public eye with opinions concerning the public interest their views have been met with practically universal respect, even when their ideas have been far in advance of the times.

Their proposals have not met with 100 per cent approval. That isn't necessary. So long as the respect is there, agreement or disagreement is of secondary importance.

So, take your stand on those things which, in your honest opinion, mean the most to the general welfare of the territory your company serves. Take it openly as an officer of a utility company, fully conscious of the obligation it owes to the civilization it has done so much to create. And tell the world about it!

In other words, get out before the public and tell them what you are thinking. Appear personally before the people throughout your territory. Talk to them with your own lips. Let them watch you while you are doing it. Watch their reactions with your own eyes. Tell them about your objectives. Offer them your ideas for the attainment of these aims. Be a living man speaking with a living tongue.

A half a dozen public speeches, well prepared, will do more to convince your public that you are a man with an interest in their interests than all the advertising, all the statements, all the canned public relations material at your command.

And all you have to do is to let the right people know that you are available for the right type of public gathering. I'd wager right now that within the past six months you've turned down at least ten speaking invitations. In the future, don't. Accept them, instead.

In this connection, may I urge you not to ignore the smaller cities in this matter of personal appearances. In these smaller places, important people are a much greater novelty than they are in the metropolitan centers. And they command much more attention both from the newspapers and from the people generally. A "major-league" business man is a source of real excitement in a county-seat town.

As the story of your public appearances gets around, as pertinent views on questions of deep community concern are voiced by you, interest in those views will grow. Almost automatically, you will find yourself in a position to catch the public eye just about as often as you desire. You will be asked to make more speeches, you will receive a growing volume of requests for interviews and statements and articles, you will be urged to participate in an ever-widening variety of movements aimed at community betterment.

Working along these lines, speaking as a utility man but not as a utility man interested only in his company's selfish aims, you will find that, slowly but surely, you will be heard, you will be believed, and you will be followed.

At this point I think I hear one final objection. "But utility men have gone to the public before. And what did it get them?"

The history of the utility executive as a would-be moulder of public thought is principally a history of rear-guard actions. Most of the speeches have come *after* the utilities have been attacked, and they have been devoted to defenses of the utility companies' rights.

To have genuine value, a program aimed at the establishment of public leadership must not be deferred until the moment when controversy muddies the waters. It should be instituted and developed while the coast is clear and the sun is shining. It should be keyed upon a declaration of responsi-

bilities and not a defense of privileges. It should look ahead. It should embody concrete proposals. It should be candid.

THE question that remains is: "Is it worth the time and energy necessary to put it over?"

I believe it is—and for one specific reason. The greatest force working against your interests today is a highly personalized one—the force of political leadership. The only thing that can keep that very human force in check must be another human force—a human force exercised through personalized business leadership.

Very truly yours,

Ralph B. Comey

How to Start a "Better Service" Crusade

THE *New Yorker* recently contained an interesting discussion of a one-man crusade started by one Leo Fish, who is determined to force more widespread use of escalators, especially in such public places as metropolitan railway and subway terminals. Mr. Fish, it appears, will accept no compromise, whether it be elevators, magic carpets, or bean stalks. He wants escalators and he wants a lot of them. But *The New Yorker* was particularly interested in the Fish crusade technique. It stated:

> We were curious about the proper method of getting a crusade under way, and asked Mr. Fish how he had managed his. He told us everything, right from the very first moment he had the idea. It came to him on the last Monday of 1936. "Suddenly," he said, "like the theory of relativity came to Einstein." His first move was to write to the New York Central. He received a reply from a Mr. Palmer, saying that their Mr. Regan would look into the matter. Mr. Regan called, discussed the problem with Mr. Fish, and said he would file a report. Then Mr. Fish went into the publicity angle of the campaign, writing letters to New York and Westchester papers. Some dozens of people answered his plea for support, and others telephoned him, one exclaiming, "God bless you, Mr. Fish!" He achieved a hearing before the transit commission, which hasn't yet ventured an opinion. He also wrote Grover Whalen, suggesting that escalators would be handy in handling extra-heavy World's Fair traffic. Mr. Whalen replied that it wouldn't be right for him to express an opinion. And there, at the moment, matters rest.

Well, that seems simple enough if you like to go in for that sort of thing. But we wonder if Mr. Fish can tell us how to stop a crusade once it is started.

(Ed. Note: The foregoing has no relation whatever to the new Fish elevators at Bonneville dam.)

Keeping Up with Uncle Sam

By FRANCIS X. WELCH

THE various pundits and observers still seem to be puzzled about the real significance of the action taken by the Federal Reserve Board last month in freeing a healthy chunk of "sterilized" gold and lowering the rediscount rates. It was an obvious reversal of the anti-inflation policy we heard so much talk about last winter; but why?

In private conversation, Treasury experts hint at vague, varying, and often conflicting reasons. There is talk of the need of greasing the market with a little easy money to offset the stiffening reaction to war scares. Then, too, it seems that many of those buyers and builders who went under the glib label of "deferred activity" in the assured appraisal of New Deal economists of a year ago are still deferring their activity. They have not yielded to the necessity of "irreducible replacements" nor to the threats of mounting prices.

One thing is certain, however, and that is that the Treasury is nervous about the slackening flow of money for government borrowing. A suspicion is beginning to penetrate into Washington via its financial agencies, that business is beginning to find the cost of government regulation and reform more of a burden than the New Dealers anticipated. Secretary Morgenthau, in particular, is not happy over the outlook.

His position is somewhat complicated by the buoyant enthusiasm with which the President is said to be planning a big push all along the "must" line at the next congressional session.

The Secretary is much too loyal to argue the point with the President, but he has probably been thinking the same thought that Editor Raymond Moley has been writing; namely, that it is about "time for us to consider, as the French have had to do, whether we can afford at once all of the reform we have talked about and still continue to live in the style to which we have become accustomed."

Certainly, if the Federal Reserve finds it necessary to pull any more boards from the inflation barrier set up in the gold reservoir before next January, Congress will begin to ask similar embarrassing questions about additional reform legislation.

THOSE who were in attendance at the recent conference of state governors at Atlantic City bring back word of some surprisingly heretical reactions to the speech of Governor Aiken of Vermont bitterly attacking the Federal government for what he believes is a gigantic power grab. Governor Aiken was one of those rare specimens in attendance. He was a Republican governor in office. (New Jersey's Hoffman and Maryland's Nice made it a trio.) For this distinction he was accorded not only full liberty of expression, but careful attention by his Democratic confreres.

It was hardly to be expected, however, that good Democrats would stand up and cheer when Governor Aiken accused the New Deal of trying to rob and cheat states out of all rights to water-power sites. He was referring, of course, to the action taken at the last session of Congress when the administration blocked the New England states flood control compact because Federal rights over water power were not adequately protected from state preëmption.

Of course, no Democratic governor went on record as seconding Governor

Aiken's denunciation of a Federal government power steal, but the applause from the New England contingent was immediate and liberally augmented by applause from some of the Western states. Southern members preserved an icy silence.

After the formal session was over, there were verbal reënactments of the Civil War in the taprooms and guest rooms of the Atlantic City hotel where the convention was held. If Daniel Webster had come back to this mortal scene, however, he would no doubt have been sorely puzzled to hear New England governors argue hotly about "states' rights," while southern executives drawled impressively about the necessity for Federal control of "ahwer grayt natcherl reezorces of watah powah!"

Governor Aiken's speech reminded this writer so much of another governor's denunciation of Federal invasion of a state's water rights that he could not resist the temptation to look back through old files. Sure enough, there it was—a letter written back in August, 1931, by the governor of New York state to former President Hoover demanding to know what was going on between the Federal government and the Dominion government concerning the St. Lawrence treaty.

The letter from Albany bristled with insistence on the sovereign rights of the state of New York in the St. Lawrence water power and warned the Federal government in no uncertain terms to keep out of its affairs. Yes, you've probably guessed it now. The letter was written by Governor Franklin D. Roosevelt.

SPEAKING of water power, there seems to be some difference of opinion about the financial prospects for the proposed Grand river dam in Oklahoma, for which the President recently approved a $20,000,000 PWA loan-grant. In December, 1936, the National Resources Committee considered a smaller and more restricted Grand river project (estimated at $9,000,000) and placed it on the "deferred construction" list with the remark that "there is no present market for this power." In announcing the PWA loan, however, Secretary Ickes stated: "In a special survey the Federal Power Commission has indicated that there is an ample market for this potential energy in the surrounding urban and rural areas."

Maybe things have changed a lot in a year in Oklahoma. Or maybe there was no market for a $9,000,000 dam but a good chance for a $20,000,000 job. Anyhow, the moral of the story seems to be that if the NRC can't find a market for power, send the FPC.

WHILE on the subject of PWA loan-grants for local public power plants, it is quite likely that the next session of Congress will witness a renewed drive by certain congressmen for Federal pap in the form of power benefits. This time, however, the demands will not be for Federal money for new projects but for a remission of indebtedness on old ones.

Seems that way back in Teddy Roosevelt's day, the Federal government adopted a national policy of financing irrigation projects. Most of them were small, not many of them involved power, and all of them were supposed to be self-supporting. Little was heard of them.

There was trouble, however, from the very beginning about cost allocations and power rates. Suppose a project was paid for; who should thereafter receive revenues from power operations? The government which built the project, or the water users who paid for it? All this, mind you, was before the day when the Federal government began charging off so much to navigation and so much to flood control, etc. The irrigation customers were supposed to pay for the works.

Under the New Deal, however, the Federal government has been making such indirect subsidies and outright free grants for its own huge hydro projects. Now the older project patrons are beginning to wonder why they should be expected to pay their entire bill when newcomers like Bonneville, TVA, and so forth, are getting such liberal markdowns gratis from Uncle Sam. It's the old story of the early laborers in the vineyards complaining about the master's liberality to the eleventh hour arrivals.

Financial News and Comment

By OWEN ELY

Stock Decline Outruns Business Dip

THE sharp decline in the stock market has continued unbroken for about six weeks except for minor temporary rallies. While it is difficult to measure the general effects on business confidence, the more immediate results will undoubtedly be felt in the steel and mining industries and related lines.

The railroad equipment industry had already been affected by a considerable reduction in new orders, pending adjustment of railroad wage demands; and approaching settlement of this issue should help to clarify the situation somewhat (although the rate increase decision, also a factor, will take longer to work out). Machinery lines have been irregular for some months, although August showed an unexpected gain.

The brightest current picture is in retail trade, where substantial gains over last year are now being reported, particularly in the farm belt; to what extent the belated upturn is due to favorable weather, and to what degree to price concessions or other factors, is hard to determine. Carloadings have been in a down-trend (after seasonal adjustment) for several months, but the latest figure indicates a moderate upturn. Electric power output for the week ended September 18th continued to follow its recent trend, the gain over last year dropping to 5.1 per cent compared with 6.2 per cent in the previous week; the *Times* seasonally-adjusted index, which has fluctuated between 105-10 since early in January, has now slipped a little below the 105 level.

The decline in stocks would appear much less formidable if the artificial advance of June 15th-August 15th could be ignored. The Dow-Jones industrial average on September 28th was only about 8 per cent below the June 14th level; a few days earlier it was close to that level. The utility index was 24.08, compared with 25.46 on June 28th, a net drop of 5 per cent. The rail index, however, is about 20 per cent under the June figure, having failed to participate much in the July advance.

Because of the rapid change in day-to-day conditions, today's comment may be of little value by the time it is read. While stocks may eventually move lower in response to the current check to new orders for the heavy industries, a substantial interim rally sometime in the near future would give business men who take their cues from the stock market a breathing spell to recover their shattered morale.

Utility Financing Programs

WHILE new bond issues have for some weeks been largely limited to tax-exempts (with total financing in the fortnight ended September 18th amounting to only about $12,000,000), some utility companies are planning new issues. Ohio Edison (Commonwealth & Southern system) has filed registration for $8,500,000 first mortgage 4s of 1967, which were eligible for offering September 29th.

Central New York Power Corporation (formerly Niagara Public Service Corporation) has registered $48,344,000 Series "B" general mortgage 3¾ per cent bonds due 1962, of which about one-fifth

will be used for construction of a new steam generating station and transmission facilities. Idaho Power Company has also filed a registration for $18,000,000 first mortgage 3¾ per cent due 1967, of which a part will be used in connection with improvements. Allowing for the usual 20-day period, the two latter issues should be ready for offering about October 7th.

There are increasing indications that much utility construction work is being financed through the medium of bank loans; leading commercial banks in New York city are said to have added substantially to their portfolios of loans to utility operating companies in recent months. Moreover, it seems likely that this tendency will continue, regardless of market conditions, until the legal deadlock between the utilities and the SEC is broken. However, refunding operations will doubtless continue whenever markets are favorable.

Appalachian Electric Power Company, principal subsidiary of American Gas & Electric Company, is planning refunding issues totaling about $65,000,000, divided about $50,000,000 mortgage bonds and $15,000,000 debentures. The registration statement may be filed sometime around October 1st, unless general conditions are too chaotic.

Detroit Edison Company, which has a heavy plant improvement program as well as $15,000,000 bonds eligible for refunding after October 1st (when the redemption premium drops to 105), will probably defer action until next year. It was planned early last spring to issue additional capital stock, and 500,000 shares were authorized to cover future needs; but the present market makes recourse to a stock offering impracticable. While, therefore, President Dow has continued his policy of replacing obsolete equipment with the most efficient facilities obtainable, these are being financed through bank loans. Construction work now in progress or definitely planned for next year may total in the neighborhood of $9,000,000. Many of the economies which are gained from this modernization program have been passed on to the consumers in the form of lower rates.

West Penn Power Company will probably have to issue additional common stock to finance its growing business, according to testimony of Vice President Ross before the SEC. Mr. Ross also discussed the plans of American Water Works for new financing to complete its system-revamping program recently submitted to the SEC. He stated on September 14th that a sales price of $25 to $30 a share was anticipated (under more normal market conditions). With current earnings of $1.60 per share, Mr. Ross thought that the stock should normally sell at 15-20 times earnings. The subsequent decline in the stock to 14, however, may force a revision of these plans.

The $6-9,000,000 cash which the company expects to raise through eventual sale of stock might be used to purchase common stock of Potomac Edison Company or to make advances (or buy stock) of Monongahela West Penn Public Service Company, in both cases to cover construction work now in progress. Following his testimony, Mr. Ross was questioned regarding "write-ups" by subsidiaries and also regarding the large number of subsidiaries (there are 151 companies in the system).

Officials of Columbia Gas & Electric Corporation were interested spectators at the American Water Works hearings, since they have a similar program under discussion with the SEC. Should the system obtain a clean bill of health from the SEC under the "death sentence" clause, this would pave the way for capital readjustments which might be of considerable benefit to stockholders. Much system simplification has already occurred and elimination of two more intermediate concerns would probably complete this program. Both the gas and electric properties seem to be well integrated from a territorial point of view. Columbia Gas has practically completed the refunding program of its subsidiaries, but over $200,000,000 of its own debenture bonds and preferred stocks might be eligible for refunding

under favorable market conditions.

Northern States Power Company of Minnesota expects to do its permanent financing next year, using bank loans to take care of any 1937 needs. The company has asked the SEC to permit reclassification of 275,000 shares of preferred stock as a convertible issue.

Sometime ago *The Wall Street Journal* listed some $400,000,000 financing which seemed definitely in prospect during the fall, as follows:

Rochester Gas & Electric	$ 3,000,000
Consolidated Edison	80,000,000
Central New York Power	50,000,000
Appalachian Power	85,000,000
Public Service of Colorado ...	45,000,000
Ohio Edison	10,000,000
Idaho Power	18,000,000
Commonwealth Edison	80,000,000

Of the above, only about $78,000,000 has thus far been registered, and the pending Appalachian Power registration has apparently been reduced some $20,000,000. Of the $400,000,000 program, the *Journal* estimated that about one-eighth would be for new capital purposes and seven-eighths for refunding.

Troubles of the New York Tractions Continue

STOCKHOLDERS of Brooklyn-Manhattan Transit who have watched their stock decline this year from 53 to 9¾ must now forego dividends, directors having omitted the disbursement due September 20th. The irony of the situation is that CIO labor leaders charge that the company is making more money than any other traction company in the city and that profits are more than ample to increase wages. Thus far a strike has been postponed by Mayor LaGuardia who has asked both sides to submit their differences to negotiations. Continuance of the present traffic decline, plus the big rise in labor costs involved in the union's demands, would mean insolvency in less than a year according to President Menden.

Chairman Dahl, at a hearing September 22nd before the fact-finding board appointed by the mayor, offered (in lieu of the 12 per cent pay raise asked by the union) to devote to pay-roll purposes all net revenues over and above taxes, fixed charges and maturing obligations which the company will receive between October 1, 1937, and October 1, 1938. The offer was rejected by the union. The hold-up character of the strike threat was indicated by the statement of Harry Sacher, counsel for the Transport Workers Union, that "the cost of a strike to the company will be tremendous. It will mean a loss of at least $3,000,000 to the company for the first month alone, on a conservative estimate. The company, by granting the union's demands, can buy its peace without inconveniencing the citizens of Brooklyn."

Mr. Sacher scoffed at the company's plea of possible insolvency, pointing to a $20,000,000 surplus said to have been amassed out of earnings. The use of such an argument indicates the childish and superficial logic frequently used by labor representatives. Obviously the amount of surplus on the company's books does not represent its cash resources and has no relation either to current earning power or the cash reserves which might, for a time, protect it from insolvency. The union's refusal to accept all net income during the coming year, before any is made available to preferred or common stockholders, further illustrates the inconsistency of the labor demands.

Two subsidiaries of B.-M. T. have appealed to the U. S. Supreme Court for a refund of taxes paid New York city under the 3 per cent levy on gross income.

THE recent stockholders' meeting of the Interborough Rapid Transit Company, the first held in many years, was unable to elect a new directorate because of the lack of a quorum. However, the fact that the Bigelow committee controlled nearly all the 105,000 shares represented at the meeting seemed to indicate possible success for the new group interested in the company's affairs. Ernest A. Bigelow pre-

sented a formal resolution requesting the present board of directors to convene in a special meeting to obtain the resignation of several members, thus paving the way for new elections, and he was appointed to confer with the board to this end.

Mr. Bigelow's program would include reorganization of the system under the National Bankruptcy Act, following settlement of the dispute over the Manhattan lease. This, however, might require new Federal legislation, and if this is not obtained a friendly reorganization would be attempted.

He expressed the opinion that the elevated properties, as originally leased, have continued profitable, the later extensions constituting the difficulty. He also felt that disaffirmance of the lease might endanger the contracts which Interborough has with the city, and hence would prefer that both companies take a united stand on unification proposals.

Meanwhile, the system has continued to lose ground slowly due to the gradual encroachment of the Independent Subway system. In August the number of passengers declined 2.63 per cent compared with last year, and after adjustment for last year's extra Saturday there was a decline of 3.75 per cent. Receiver Murray blamed part of this showing on weather conditions and the increased number of vacations, however.

Charles Franklin, counsel for the Manhattan Railway Company, announced September 21st that he would apply for a court order directing payment of the October 1st coupon on the Manhattan Railway Consolidated 4s. He forecast swift developments, not only in the solution of the Interborough-Manhattan tangle, but also with regard to modified unification proposals following the November elections.

Third Avenue Railway, also affected by the rising costs which have hit New York city tractions, has passed the interest on its adjustment 5 per cent bonds.

Utility Price-earnings Ratios Drop Sharply

BASED on the closing prices of September 24th, 21 utility stocks were selling to average about 10.8 times the

	Approx. Sept. 24 Closing Prices	*Per Share Earnings 12 Mos. End. June 30, '37*	*Sept. 24 Price-Earnings Ratios*	*1936 Ratios (Dec. 31 Prices)*	*1936 Ratios (Highest Prices)*	*1935 Ratios (Lowest Prices)*
American Gas & Elec.	25	$2.39	10.5	17.8	21.5	8.9
American Lt. & Tract.	14½	1.88	7.7	12.9	15.1	5.7
American Power & Light	7	.53	13.2	48.0	56.5	..
American Water Works	14	1.59	8.8	16.5	17.6	5.4
Columbia Gas & Electric	9	.48	18.7	34.7	44.2	7.9
Commonwealth & Southern	2	.19	10.5	26.0	42.3	..
Con. Edison of N. Y.	30	2.41	12.4	19.2	20.8	7.3
Con. Gas of Baltimore	68	4.59	14.8	19.3	20.9	11.9
Detroit Edison	105	8.52	12.3	17.5	18.3	8.5
Electric Power & Light	13½	1.06	12.7	40.7	43.2	..
Engineers Public Service	7½	.51	14.7	49.3	50.4	..
Federal Light & Tract.	12½	2.36	5.3	9.9	10.6	2.4
National Power & Light	8	1.16	6.9	12.0	15.0	5.7
Niagara Hudson Power	10	.92	10.9	24.6	26.1	5.0
North American Co.	20	2.01	10.0	17.8	20.4	6.7
Pacific Gas & Electric	28	2.90	9.7	13.9	16.1	6.3
Pacific Lighting	38	4.62	8.2	13.3	15.1	4.4
Public Service of N. J.	36	2.82	12.8	17.8	18.8	8.0
Southern Calif. Edison	21	2.33	9.0	11.9	13.3	6.5
United Gas Improvement	11½	1.13	10.2	14.3	18.7	9.0
United Light & Power	4	.47	8.5	30.8	32.6	..

earnings for the twelve months ending June 30th, compared with the following average ratios for other periods: Ratio of 1936 earnings to December 31, 1936, prices, 22.3 times; ratio of 1936 earnings to 1936 record high prices, 25.5 times; and ratio of 1935 earnings to 1935 record low prices, 6.8 times. While, therefore, utility stocks are now undoubtedly on the bargain counter in relation to earnings, it is interesting to note that they are still selling at somewhat higher prices in relation to earnings than at their lowest levels in 1935, when they were depressed by passage of the Utility Act.

The accompanying table giving detailed figures is based in part upon a statistical study by Dow-Jones, adjusted for subsequent changes in market prices.

On the last page of "Financial News and Comment" is our regular tabulation of interim earnings statements, which continues to indicate remarkable gains in income available for stockholders. When third quarter figures are available (in about six weeks) these will afford a much better insight into the current trend. Since only four or five of the large systems report monthly net income, it is impossible to construct any index of current earnings except by use of the quarterly figures. While the table contains a number of returns for periods ending July and August, the monthly figures are combined with those for the preceding eleven months (or other periods) which prevents obtaining a clear picture of the immediate trend.

Corporate News

COLUMBIA Gas & Electric Corporation and six Ohio subsidiaries, together with certain officials, are being sued for $42,000,000 in the Common Pleas Court by John L. Davies of Columbus on behalf of himself and other gas users. The suit asks an injunction against further adulteration of natural gas, an accounting of $14,000,000 funds collected from consumers, and triple damages. The suit, which came during a rate hearing before the utilities commission, has been ascribed to "politics" by an official of the company.

Stock of Canadian Hydro-Electric Corporation, Ltd., is being exchanged for that of Gatineau Power Company, and the 5 per cent preferred and common stocks of the latter company are being admitted to the New York Curb.

The reorganization managers of Peoples Light & Power Corporation have filed a brief with the SEC in connection with the proposed reorganization plan to which the commission's staff objected. Percival E. Jackson, counsel for a group of New York security houses, told the commission that his clients had traded in about $1,500,000 of the new company's securities on a "when-issued" basis. Judge Nields of the U. S. District Court had already confirmed the reorganization plan. The reorganization managers hold that many "innocent purchasers" of the when-issued contracts will suffer severe losses if the SEC withholds its approval.

PHILADELPHIA Gas Works Company, subsidiary of United Gas Improvement Company, has proposed to the city council of Philadelphia a plan to lease the city-owned gas plant and operate it for ten years under a commission with rate-fixing powers. The present gas rates for domestic use begin at 90 cents, but Mayor Wilson in a campaign for 50-cent gas has warned that the present lease will be terminated.

Consolidated Edison Company has announced that holders of over two-thirds of New York Steam Corporation preferred stock have accepted the plan of exchange for the parent company's $5 preferred stock, and that the plan has become effective.

Action on the proposed dissolution of South American Utilities Corporation, which was formed through reorganization of Intercontinents Power Company, a subsidiary of American Equities Co., has been postponed, since insufficient holders of Intercontinents Power debenture 6s have converted their securities to South American Utilities preferred stock to accede to the plan.

FINANCIAL NEWS AND COMMENT

Western Union Telegraph Company has deferred further payments on its common stock, following three quarterly payments of 75 cents each. July net was only about 10 per cent of last year's figure, although earnings were up.

INTERIM EARNINGS STATEMENTS

	No. of Months Included	End of Period	System Earnings per Share (a) Last Period	Previous Period	PerCent Increase	PerCent Increase
Electric & Gas						
American Gas & Electric	12	July 31 (b)	$2.45	$2.05	20%	..
American Power & Light (Pfd.)	12	July 31	6.45	5.42	19	..
American Water Works	12	June 30 (c)	1.59	1.30	22	..
Boston Edison	12	June 30 (c)	8.94	9.19	..	3%
Cities Service P. & L. (Pfd.)	9	June 30 (c)	13.90	10.51	32	..
Columbia Gas & Electric	12	June 30 (c)	0.48	0.51	..	5
Commonwealth Edison	7	July 31 (b)	1.35	0.91	49	..
Commonwealth & Southern (Pfd.)	12	July 31 (b)	10.44	7.31	43	..
Consolidated Edison, N. Y.	12	June 30 (c)	2.41	1.97	22	..
Consolidated Gas of Baltimore	12	June 30 (c)	2.59	2.53	2	..
Detroit Edison	12	Aug. 31	8.63	8.61	..	.
Electric Power & Light (1st Pfd.)	12	June 30 (c)	14.08	7.16	97	..
Federal Light & Traction	12	June 30 (c)	2.36	2.59	..	8
International Hydro-El. (Class "A")	12	June 30 (c)	1.60	0.22	630	..
Long Island Lighting	12	June 30 (c)	0.21	0.22	..	5
Middle West Corp.	6	June 30 (c)	0.13	0.08	62	..
National Power & Light	12	Aug. 31 (c)	1.24	0.92	35	..
Niagara Hudson Power	12	June 30 (c)	0.89	0.55	62	..
North American Co.	12	June 30	2.05	1.52	35	..
Pacific Gas & Electric	12	June 30	2.90	2.37	22	..
Public Service Corp., N. J.	12	July 31 (b)	2.84	2.42	17	..
Southern California Edison (e)	12	June 30 (c)	2.33	..	..	..
Stan. Gas & Elec. (Pr. Pfd.)	12	June 30 (b)	9.93	7.13	40	..
Stone & Webster	12	June 30 (c)	1.01	0.62	63	..
United Gas Improvement	12	June 30 (c)	1.13	1.08	5	..
United Light & Power (Pfd.)	12	July 31	8.69	7.04	23	..
Gas Companies						
American Light & Traction	12	July 31	1.86	1.62	14	..
Brooklyn Union Gas	12	June 30 (c)	2.93	3.07	..	5
Lone Star Gas	12	June 30 (c)	1.04	0.95	10	..
Pacific Lighting	12	June 30	4.62	4.00	16	..
Peoples Gas Light & Coke	7	July 31 (c)	2.97	1.57	89	..
United Gas Corp. (1st Pfd.)	12	June 30 (c)	27.39	19.08	43	..
Telephone & Telegraph						
American Tel. & Tel. (e)	12	June 30	10.20	7.41	49	..
General Telephone	12	June 30 (c)	1.61	1.24	30	..
Western Union Telegraph	7	July 31	2.11	3.67	..	43
Traction, etc.						
Brooklyn-Manhattan Tran. (Pfd.) (e)	2	Aug. 31 (b)	0.33	2.53	..	87
Greyhound Corp.	12	June 30 (c)	1.62	1.69	..	4
Twin City Rapid Transit	6	June 30 (c)	1.70	1.36	25	..
Systems outside U. S.						
Amer. & For. Power (Pfd.)	12	June 30 (c)	7.41	4.01	85	..
International Tel. & Tel.	6	June 30 (c)	0.67 (d)	0.26 (d)	158	..

(a) On common stock, unless otherwise indicated following name of company; in some cases, Federal surtax not deducted.
(b) Report also published for month ending same period.
(c) Report also published for quarter ending same period.
(d) Excludes Spanish subsidiaries and Postal Tel. & Tel. Co.
(e) Parent company only.

What Others Think

Can a Power Shortage Happen Here?

IN the fifty years' life of the electrical industry in America there has never been a real national power shortage. There were perhaps a few close calls in certain localities during the stress of the World War period. Since then, however, there has been no apprehension over power supply, aside from rare and isolated instances involving hydroelectric production at water-power sites suffering from prolonged drouth. These shortages, however, were but temporary in character and the increasing availability of standby service through interconnection promises to make such conditions practically negligible in the near future.

On the other hand, the power industry found itself somewhat embarrassed on the whole by surplus capacity during the depression period with its almost daily diminishing average load. Nevertheless, two years ago when the depression was hardly *fait accompli,* the Federal Power Commission made a report to Congress to the effect that a national power shortage some time in the future would be a distinct possibility if the industry permitted business activity to return to 1929 levels or better without taking steps to increase capacity and modernize plant installation.

This was vigorously denied at the time but since then the power industry has been ordering generating equipment at an ever-increasing rate. It will spend about $150,000,000 on increased capacity in 1937 and equipment production has already broken all records.

THE old argument popped up again several weeks ago during hearings on the Norris "seven TVA's" bill which the recent Congress decided to leave to cool off until the next session. Testifying before the Senate Agriculture and Forestry Committee, John D. Battle, representing the National Coal Association, stated:

> What are the facts with respect to present electric power installed capacity in relation to present consumption? The facts are, and the figures are those published by the Federal Power Commission, that at the present time nowhere in the country is there any shortage of power, but on the contrary, present installed capacity greatly exceeds present demand.
>
> So far as capacity and demand is concerned, here is the situation in a nutshell: There is already an installed capacity of 36 million kilowatts; the bill under consideration makes possible the installation of 52 million additional kilowatts of capacity. At 60 per cent utilization the present installed capacity is capable of generating 192 billion kilowatt hours; at the same rate of utilization the projected capacity would be capable of generating 276 billion kilowatt hours. Actual production in 1936 amounted to 113 billion kilowatt hours. This was 59 per cent of the potential production of existing plants, 41 per cent of new potential production, and only 24 per cent of the potential output of the existing and new plants combined.
>
> I will not read, but with the permission of the committee, I desire to file as a part of my testimony here today, a table (Exhibit A) in which the attempt is made to show in complete detail, by conservation districts, the capacity of existing power plants and the potential additional capacity under the terms of this bill. The zones used in the table are those set up by the Federal Power Commission in its report on its power survey. The boundaries of those zones do not coincide exactly with the boundaries of the conservation districts established by the bill; but in view of the magnitude of the figures involved the slight variation in district boundaries is inconsequential.

Mr. Battle's "Exhibit A" was in part as shown on page 487.

ANSWERING Mr. Battle, the Federal Power Commission, in a letter to Senator James P. Pope, chairman of the

subcommittee considering the bill, stated that it was a "misleading statement."

On the contrary, the letter stated, as a result of its National Power Survey conducted in 1934-35, the commission found and declared that upon the resumption of normal industrial activity shortages of power would exist in many districts throughout the United States, unless immediate steps were taken to provide new generating capacity; the capacity of plants then existing being estimated at 2,325,000 kilowatts less than the demand for power that would exist upon resumption of normal industrial activity, assuming the maintenance of normal reserve capacity.

That the commission's forecast, published early in 1935, of a power demand for 104 billion kilowatt hours was quite conservative is shown by the fact that the output of electric energy in 1936 reached 113,600,000,000 kilowatt hours, although many industries have not yet fully resumed their predepression rates of production. The commission's letter continued:

> Recent reports clearly indicate that many utilities are now operating without adequate reserve capacity and with no immediate provision to care for their rapidly growing loads. Under these conditions, if there should be a breakdown of one of their larger generating units, service would be interrupted with serious inconvenience not only to the consuming public but also to commerce and industry. The danger of such breakdowns is greatly increased when generating plants are continuously operated at or above their rated capacity.
>
> Many utilities are now seeking to meet this situation by the purchase and installation of additional equipment. We are advised, however, that the electric equipment manufacturers are unable to guarantee deliveries of such equipment for many months in the future. These facts, which are fully confirmed by articles appearing in the publications of the electric industry, completely refute Mr. Battle's statements regarding the adequacy of existing generating capacity.

ANALYSIS of Mr. Battle's declarations regarding undeveloped water-power sites and the effect of their possible future development upon the coal industry, demonstrates that they are also without foundation, the commission stated. Analyzing Mr. Battle's estimate that 199,165,680 tons of bituminous coal would be replaced by the construction of undeveloped water powers, the commission asserted that the total of coal consumed in generating electricity for public use in 1936 was 42,024,960 net tons; and that in zones where the largest undeveloped water-power sites exist relatively little coal is used in generating electricity.

Illustrating the "absurdity" of Mr. Battle's predictions, the commission pointed out that in the Pacific Northwest, where Mr. Battle predicts that 59,277,600 tons of coal will be "replaced"

INSTALLED CAPACITY AND 1936 OUTPUT OF EXISTING POWER PLANTS, AND POTENTIAL ADDITIONS TO CAPACITY UNDER S. 2555, BY CONSERVATION DISTRICTS

	Existing Power Plants						*Potential Increases*		
					60% utilization				
	Installed capacity (thousands of kw.)	*Potential production*		*1936 actual production*	*Excess over present production*	*Per cent used*	*Installed capacity (thousands of kw.)*	*Potential production*	
Zone		*100 % capacity*	*60% capacity*	*(Millions of kw. hr.)*				*100 % utilization (Millions of kw. hr.)*	*60% utilization*
1	15,992	140,090	84,054	47,881	36,173	57.0	5,886	51,561	30,937
2	8,595	75,292	45,175	29,102	16,073	64.4	3,605	31,580	18,948
3	1,810	15,856	9,513	4,990	4,524	52.4	10,826	94,837	56,902
4	2,677	23,451	14,070	7,382	6,688	52.5	3,431	30,056	18,034
5	2,257	19,771	11,863	7,083	4,780	59.7	1,523	13,341	8,005
6	3,716	32,552	19,531	11,844	7,687	60.6	15,664	137,217	82,330
7	1,568	13,736	8,241	5,320	2,921	64.6	11,694	102,439	61,463
TOTAL	36,615	320,748	192,447	113,602	78,846	59.0	52,629	461,031	276,619

The Columbus Dispatch

TEACHER AND PUPIL

by the development of water-power sites, only 78 tons were consumed for the generation of electricity for public use during the entire year 1936. In eight states no coal whatever or an infinitesimal amount is used in generating electricity. In nine more states use of coal for this purpose in 1936 amounted to less than 30,000 tons each.

Nine-tenths (88 per cent) of the coal consumed in generating electricity is used in the Northeast and Middle West, which have only 12 per cent of the nation's undeveloped water power, the commission added, while the other five zones, embracing the remainder of the United States, which have nearly nine-tenths (88 per cent) of the undeveloped water power, consume only 12 per cent of the coal used in generating electricity. The commission concluded:

> In other words, if all the undeveloped water-power sites in these regions should be developed for the purpose of generating an estimated annual output of 241 billion kilowatt hours, they would displace a present use of only 4,856,392 tons of coal. This is a little less than one per cent of the coal produced in a normal year before the beginning of the depression.

WHAT OTHERS THINK

PRESIDENT C. W. Kellogg of the Edison Electric Institute gave a different viewpoint on the possible power shortage. He said that "in the twelve months ending April, 1937, the increase in electric generating capacity was 800,000 kilowatt hours, and another 800,000 kilowatt hours is now in the process of installation." He added that modern equipment permitted the utilities to run as much as 20 per cent above stated capacity at intervals and that there hasn't been a national shortage of power in fifty years and hints that there isn't likely to be any in the near future.

According to the *Electrical World*, the power industry had 34,466,000 kilowatt hours of generating capacity in December, 1936—a figure slightly larger than the estimate of the Edison Electric Institute (34,076,000). If 800,000 kilowatt hours are added before December, 1937, therefore, the industry's generating capacity will be in the neighborhood of 35,000,000 at that time. Analyzing the prospective demand in the light of these figures, *Business Week* stated:

> But consumers, at peak periods, call for all or most of the juice available, and at other times take hardly any. Thus the effective figure over a week's time is usually under 40 per cent of the potential supply. On this basis, using the higher figure for generating capacity, the industry can expect to turn out about 2,370,000,000 kilowatt hours a week at the end of the year.
>
> The largest week ever recorded so far was 2,298,000,000 kilowatt hours in the seven days ended July 17th. Thus there still is a modest reserve. But will there be a reserve just before Christmas when, every year, the highest point for the twelve months is reached?
>
> That's not so easy to say. A slump in business could assure it. It is a cinch that the utilities will call on all their standby equipment, and may even hook up some "retired" generators.
>
> But, before the depression and the holding company law with its "death sentence," the utilities always tried to keep ahead of demand. They spent more than $281,000,000 on generating equipment in 1929 and $325,000,000 in 1930. That put them on easy street until the big push started in 1935.
>
> Consumption kept right on soaring in 1936. It has been running 12 per cent and 13 per cent ahead of 1936 thus far in 1937. Utilities have been ordering turbines at a great rate for eight or nine months, and it now takes eighteen to twenty-four months to get delivery.
>
> If the week before Christmas this year were to run 12 per cent ahead of 1936, the consumption would reach a figure of 2,574,000,000 kilowatt hours against the industry's ability to produce about 2,370,000,000. But industrial demand is flattening out, and it's unlikely that weekly gains over 1936 will exceed 5-8 per cent late this year.
>
> A convenient measure of what the peak week in December will be is a projection from the high week in June. In years of pretty good business, such as 1928, 1929, 1930, 1034, 1935, and 1936, the gain from June to December has averaged 10.16 per cent; the smallest gain, in 1934, was nearly 7 per cent. Using these percentages, the high week in December should be between 2,395,000,000 and 2,465,000,000 kilowatt hours. And it will be noted that both figures are above probable capabilities of the generators which then will be operating.
>
> By running, as Mr. Kellogg suggests, at 20 per cent above rated capacity, the utilities can probably just about squeeze through in most cases.

THE biggest danger, however, as the FPC points out, is that some big generating plant will break down under the strain if operations have to be stepped up above rated capacity for extended periods. Thus, it may well be that utility men will be saying prayers for a very definite Christmas present next December in the form of a month of sustained effectiveness in equipment. After the December peak the industry should be well out of the woods with the increasing delivery of turbine orders and the completion of spring installations.

—F. X. W.

CREATION OF REGIONAL CONSERVATION AUTHORITIES. Argument by John D. Battle in opposition to S. 2555. Senate Subcommittee on Agriculture and Forestry hearing. July 1, 1937.

STATEMENT by Federal Power Commission in answer to argument presented by John D. Battle at hearing on the Norris Bill (S. 2555). Release No. 231. Federal Power Commission, July 26, 1937.

ARGUE OVER POWER CAPACITY. *Business Week*. August 7, 1937.

Debate Literature on Public Ownership

WHEN the National University Extension Association decided on government ownership of the electric industry as the proposition for high school student debate during the scholastic year of 1936-37, it was to be expected that the release of a number of new books on the subject would be inspired. The most interesting exhibit adduced in this connection was the Tenth Annual Debate Handbook, sponsored by NEA's own Committee on Debate Materials and Interstate Coöperation, and edited by Professor Bower Aly of the English department of the University of Missouri.

This work is in two paper-covered volumes, each about the size of an ordinary issue of PUBLIC UTILITIES FORTNIGHTLY, and yet so compact as to contain 220 pages of text (each), including thirty-seven signed articles (some expressly prepared by the authors, others reprinted) and numerous shorter articles, references, quotations, and a very well selected bibliography. A mere recital of names of the featured authors will give a ready indication of the diversity and impartial balance attempted by the editor.

In addition to a factual exposition of the question and some debating instructions and suggestions by Dr. Aly, the list includes: Professor Roy E. Curtis, Carl D. Thompson, Frank A. Newton, Harry W. Laidler, Warren M. Persons, Arthur E. Morgan, Wendell L. Willkie, Dr. Joy Elmer Morgan, Dr. David Friday, Morris L. Cooke, H. C. Baldwin, Judson King, William M. Carpenter, Francis X. Welch, Henry G. Wells, Edna C. MacMahon, Eliot Jones, Truman C. Bigham, James C. Bonbright, Gardiner C. Means, Professor Martin G. Glaeser, Dexter M. Keezer, Stacy May, Professor Herbert B. Dorau, A. Murray McCrimmon, Marquis W. Childs, H. S. Bennion, C. C. Linnenberg, Jr., the late Delos F. Wilcox, Dr. George Otis Smith, and J. Maurice Clark.

ANYONE familiar with the literature of this subject will readily perceive that Dr. Aly has assembled here about as representative and balanced a group of commentators on public ownership as anyone could want. In fact, one might be tempted to go somewhat further and say that Dr. Aly has corralled nearly all of such commentators. One need only add such conspicuous absentees as Senator Norris, Charles W. Kellogg, David Lilienthal, Samuel Ferguson, and about a dozen others, and Dr. Aly would have just about a complete gallery. His selection also represents a wide variation in treatment. Not all of the articles are partisan in tone. Some are purely factual statements put in obviously for background material.

As to the relative excellence of the argument, there will naturally be much difference of opinion. This reviewer liked very much the hint given by Dr. Aly in the passage reprinted in the beginning of the second volume from Lincoln Steffens' autobiography. In that passage the late Mr. Steffens pointed out the futility of trying to fix responsibility for abuses on any particular group. Some said it is the wicked politicians who are to blame, but Mr. Steffens found them on the whole "pretty good fellows." The politicians blamed the business man, but here again Mr. Steffens found business men neither better nor worse than the politicians. Could the responsibility be fixed at all? It was the same old story. Adam blamed Eve and Eve blamed the serpent. Mr. Steffens slyly concluded that it was the apple that was to blame.

But like most other clever explanations, it is too ambiguous to be conclusive. The public ownership group will seize on the apple as the symbol of privilege and say it ought to be abolished. The private enterprise champions will declare that public ownership of utilities would simply be the same apple under different management and more likely to produce corruption and mischief.

THE point here is that Dr. Aly in his selection of articles seems to have tried always to keep the apple before the debaters to lessen the danger of having them get sidetracked on numerous acrimonious and irrelevant discussions about the guilt and virtues of our particular industrial Adams or political Eves.

Although Dr. Aly does make a noble attempt to confine the argument to the merits of debate proposition and avoid hog-calling contests, this does not necessarily mean that all of the reprint material is uniformly excellent or accurate. While much of it does fall in that category, there is a certain amount of indifferent stuff—factual misstatements and shoddy reasoning. Here again, this reviewer is inclined to credit Dr. Aly with astute design. How indeed is the student debater ever to pick the wheat from the chaff if he is served only triple tested wheat?

When, for example, a writer talks about the domestic electric consumers of the United States being *overcharged* by "a billion dollars a year" (this is not taken from the Handbook but from an address of a congressman) in the face of the admitted fact that the *gross revenue* of the electric industry for all domestic consumption in the United States during the last year was only a little over $700,000,000, it becomes obvious that either the gentleman does not know what he is talking about or that he prefers to let the error ride and arrive at his conclusions *ignotum per ignotius*. But after all that is the sort of thing that the student is bound to come up against and he will never develop a discriminating factual sense unless he has the practice. Dr. Aly has not admitted such freakishly obvious errors, but he does let in just a few to test the mettle of the true student.

THUS we see in one article composed for the Handbook (presumably in 1936) a government ownership advocate discussing utility taxes and using 1928 figures when current data must be known to him. Here also is a private utility spokesman industriously engaged in trying to make the Federal Power Commission rate survey say something that it very obviously did not say. Here again is a writer solemnly discussing the professional background of the Justices of the United States Supreme Court for the apparently irrelevant purpose of implying that they are intellectually dishonest. But these factors are all part of the game, and a very instructive game it is likely to be for the students of America.

Somewhat supplemental to Dr. Aly's Handbook and drafted with equal fairness is the volume of E. C. Buehler of the University of Kansas. Professor Buehler's book adds to the discussion reprinted articles by Frederick B. Barkley, Frank R. McNinch, John Bauer, Wendell L. Willkie, Morris L. Cooke, William H. Hodge, Ruth Finney, Leland Olds, Frederick L. Bird, Jr., A. Whitlow, Floyd L. Carlisle, Samuel Ferguson, Ben A. Arneson, Philip H. Gadsden, John T. Flynn, the late Governor Albert C. Ritchie, and another valuable classified bibliography. Professor Buehler's book is somewhat more explanatory especially on the holding company aspect.

—E. S. B.

ELECTRIC UTILITIES. The Tenth Annual Debate Handbook. 1936–1937. Volumes One and Two. Edited by Bower Aly. Published by Lucas Brothers, Columbia, Mo.

SHOULD THE GOVERNMENT OWN AND OPERATE ELECTRIC UTILITIES? By E. C. Buehler. Noble and Noble, Publishers, Inc. 100 Fifth Avenue, New York. Volume III. Price, $2.00.

Is the Cut-rate Taxicab on the Way Out?

IT would be idle to contend that the operation of cut-rate taxicabs in several of our large eastern cities has not hurt the street car business, but one may

well wonder whether a class of taxicab rider has not been developed in the process—a class of business that would not entirely have fallen into the hands of urban street railways and bus carriers if the taxicab operators had clung to their high price metered service of prewar days. Those were the good old days, when the taxicab was a chartered service patronized by gentlemen—to whom the ticking of the meter gave all but the most affluent the sickening sensation of throwing dimes out of the window.

If the cut-rate cab has done anything in the way of cheaper and more available service in the public interest, it would be perhaps a more or less ironical accident. It is well known to both transit and taxicab men that the first cut-rate cab promoters were far more interested in selling cabs to cabmen (generally at pretty high prices), than in serving the public. It has been charged that these promoters exploited the bread lines during the depression by inducing the jobless to drive cabs long hours daily in order to scrape up a pittance over and above the daily payment of three to five dollars on the "purchase" of their cabs.

Be that as it may, the number of cabs on the streets which resulted caused competition which brought low flat rates and this in turn developed a highly taxicab-conscious population in the cities where it was practiced. Low rates, in other words, brought wide taxicab usage until today the presence of almost 5,000 taxicabs in the city of Washington, with a population of about 600,000, causes taxicab men in other cities to rub their eyes in amazement. That is more cabs than there are in Pittsburgh, Philadelphia, and Chicago combined.

Admittedly, that is too many cabs for Washington, even with its low flat rate of 20 cents for the whole central area of the city. The District of Columbia Public Utilities Commission says it is too many and the commission ought to know. However, has not something happened in Washington that might happen elsewhere? Is it another case of breaking the "vicious circle," whereby cheap rates have developed wider usage? Some of it, no doubt, has been at the expense of the capital transit system, but even so, the street car system in Washington is no worse off—is much better off, in fact—than the street railway systems in other cities where taxicab rates are high and the number of cabs limited.

It is with these thoughts in mind that this reviewer read the recent report to Congress by the House District of Columbia Committee, recommending a taxicab limitation bill for the capital city. This report may not explain the freakish situation in Washington entirely, but it should have convinced Congress that something ought to have been done to ease the taxicab situation. Although the taxicab bill was caught in the adjournment jam, the report is still worthy of attention and maybe the committee will have better luck at the next session. The text of the report was as follows:

> From the hearings it appears that there were on June 7, 1937, 4,757 taxicabs then being operated in the District of Columbia; a greater number than in Chicago, Philadelphia, and Pittsburgh combined. These taxicabs were distributed as follows: 3,936 in the names of 19 associations, 214 operated by 4 companies, 607 operated by independent operators.
>
> Another pertinent fact brought out by the hearings was that a number of government clerks, estimated at 250, and other employed persons, were operating cabs four or five hours daily after their regular day's work was done. While your committee was appreciative of the right of workers in the lower salary brackets to augment an inadequate income, many of the government clerks were employed on a good salary basis and it seemed, in the interest of fairness to those who must depend entirely on their earnings as taxicab operators, that this competition should be eliminated. The amendment recommended, however, applies only to those who have full-time employment.
>
> The taxicab driver is a needed unit in our present economic life. His industry should be safeguarded to such an extent as to enable him to earn a livelihood without working unreasonably long hours, as many are now doing. We quote from the hearings:
>
> The reliable taxicab operator is in competition with unreliable, reckless, careless, part-time, and fly-by-night operators. He is held responsible and suffers for their misdeeds.
>
> He is gradually being forced off the downtown streets of Washington, due to the

The Providence Journal

JUST PLAIN, OLD-FASHIONED MUD!

traffic hazard caused by the present large number of cruising taxicabs.

He is not regarded as a stable and legitimate business man and is not extended the same courtesies.

He is a local business man, spending all his revenue here . . . and not taking his profits to another city. . . .

He performs hundreds of favors to the public, police department, and city officials. . . .

He struggles through the slow summer months, and when business increases in the winter he has to compete with additional cabs put on by part-time operators who work at their regular occupations during the summer.

He does not receive benefits under the old-age or unemployment insurance under the Social Security act.

Your committee concurs in the following statement made at the hearings by a representative of one of the cab associations:

This legislation will not remedy all of our troubles, but it will be a major step to stabilize our industry, help the reliable men to be recognized as stable, honest, business men, and thereby raise his credit standing which will reduce his cost of operation, raise his standard in the community to where he and his family will have no cause to be embarrassed, eliminate the undesirable element from our industry, reduce traffic congestion, reduce the work of the public utilities commission, and after a few years it will increase the earnings of the men.

Your committee also believes that this bill, if enacted, will prove an important contributing factor toward greater safety for the public.

AND what does the taxicab industry, generally, think about the situation? Here is an excerpt from a "General Survey of Taxicab Trends in the Major

Cities," as reported in *The Taxi Weekly*, the industry's trade newspaper for the New York and eastern area:

> During the current year the taxicab business has been slowly drifting away from mass competition with the street railway and bus systems, and working towards a rationalization of conduct as a public utility in the sense that the passenger should pay a reasonable rate of fare to permit the performance of a safe, responsible service, the wage earner receives a decent living wage under proper working conditions and hours, and the operator a reasonable return on the investment.
>
> The real impetus towards these conditions began with a series of strikes in Baltimore, New Orleans, Philadelphia, Chicago, Toledo, Pittsburgh, Cleveland, Milwaukee, St. Louis, Boston, Detroit, Omaha, and Buffalo, and acute labor crises in New York, Los Angeles, San Francisco, and Kansas City.
>
> Until recently very few cab companies employed union labor. The drift of countless numbers of unemployed during the depression into a cab-driving job created a highly competitive labor market with a huge turnover of from 300 to 400 per cent per annum. When the Wagner Act came into being, employing taxicab operators generally began to submit to the organization of their driving forces and in the major cities like New York, Chicago, Philadelphia, Los Angeles, San Francisco, Seattle, and elsewhere became 100 per cent organized. Naturally the labor organizations have a twofold objective. Higher and minimum wages and shorter hours. These two objectives immediately were in conflict with the state rates and unlimited competition in many cities and a surplusage of cabs in service. Operators naturally had to face the problem of higher rates to be paid by the public or go out of business. Operating economies were no longer possible to take care of wage increases. Rising costs of gas and accessories ate into meager profits. The first cities to make a change in rate by agreement with the authorities were Los Angeles and San Francisco.

THE survey goes on to say that taxicab rate increases have been made recently in Buffalo, San Francisco, Los Angeles, Seattle, Detroit, Columbus, and are pending in Kansas City (since adopted) and Philadelphia. Almost invariably these increases have resulted from higher wage demands by drivers. Since 1929 most incorporated taxicab companies have scaled down dividends to the vanishing point, which seems to be the prevailing status. On the lightweight cab, often used in cut-rate operations, the survey stated:

> When the depression came on there was a vogue for lightweight cabs made by converting a sedan type of car into a cab. These cars were purchased and used with the idea that they would have a high resale value as a used car and resold as such to the public through used car dealers who turn the speedometer back. Restrictive legislation... is reducing the prospects of reselling used cabs in this manner . . .
>
> A general survey of public demand for the type of cab they like to ride in leads us to believe that the made-for-the-purpose taxicab will be the most profitable type of vehicle. The public, with higher cab rates, wants the large, comfortable vehicle holding from one to five passengers. While it is true that such a vehicle costs more to operate, the chief added cost is gasoline consumption. Experience has shown that such a type of vehicle actually has a high resale value after 75,000 miles as a used taxicab for further service in that manner. The built-for-the-purpose taxicab combines every safety element necessary for use as a commercial transportation vehicle and is by far the safest type of vehicle because of its sturdy construction.

The general conclusions reached in the survey were as follows:

1. Taxicab fares generally have been too low to permit of good service and to pay a decent wage to the worker.
2. There have been too many cabs in operation in most large cities with the resulting cruising evil and dead mileage and division of the business into too small an earning unit per cab.
3. The larger vehicle is needed to perform a real public utility type of service compatible with safety, comfort, and cleanliness.
4. Adequate insurance protection for the passenger and pedestrian should be provided and the financial stability of an operator unquestioned for liability.

This study, according to *The Taxi Weekly*, was made from a general investigation into conditions in nearly every city in the United States and Canada of over 100,000 population.

—M. R. K.

REPORT OF THE COMMITTEE FOR THE DISTRICT OF COLUMBIA, HOUSE OF REPRESENTATIVES, on limitation of taxicabs in the District of Columbia, as reported in *The Taxi Weekly*, September 8, 1937.

GENERAL SURVEY OF TAXICAB TRENDS IN THE MAJOR CITIES. *The Taxi Weekly*. September 8, 1937.

A New England Governor Stands Up for States' Rights

FEW indeed were the Republican governors in attendance at the recent annual conference of state governors at Atlantic City. Host Hoffman of New Jersey was there, of course, and very much in evidence. The gathering was somewhat dampened by the news that sudden illness of the portly and affable Governor Nice of Maryland had curtailed his visit. Maybe there were others of the seven surviving GOP executives but if so this reviewer failed to see any other than Governor George D. Aiken of Vermont.

Governor Aiken, however, left no doubt about his presence inasmuch as his caustic denouncement of the Federal government's attitude on power and flood control was the high spot of the convention. It started a discussion which brought many a nod of approval from New England and Western Democratic governors sitting in the audience, while Southern executives were, for the most part, politely silent.

Governor Aiken concentrated his attack on the attitude of the administration toward the proposed Connecticut river valley flood control and power project, but his criticism included the whole Roosevelt program. In effect, Governor Aiken insisted, the Federal government wants to broaden its activities in a way that threatened the very existence of the states. Any natural resource might be commandeered by the Federal government, if the present trend continued. Vermont, he said, was firmly opposed to any fundamental loss of its right as a state.

GOVERNOR Aiken minced no words in setting forth the determination of Vermont to contest invasion of her rights. He recited the history of the Connecticut valley compact among Vermont, New Hampshire, Massachusetts, and Connecticut. A resolution introduced in Congress in August authorized the compact, but provided that all reservoir, power, and storage sites be held by the Federal government. This, he said, was not acceptable to Vermont.

He pointed out that many localities derived revenue from taxing utilities and power development, and stated:

> If the War Department should be given and should exercise the proposed authority to take from these towns, without recompense for loss of taxes or possible municipal development, those reservoir sites and power rights, many of them would face bankruptcy, for the construction of reservoirs under the condition would mean not only loss of taxes from utility companies but loss of income from agriculture, from industries and the preclusion of future recreational or any other form of development.
>
> As it appears now, the paramount question involved in the Connecticut interstate compact is not one of flood protection nor of power control, but one affecting the very foundation of our government. Shall the Federal government have the authority to take from a state without its consent and with or without recompense the natural resources upon which the industry, the income, and the welfare of the people may depend?
>
> A few years ago serious consideration of such a question would have been laughed at, yet today there has been introduced in Congress a measure seriously seeking this end. It is not a question affecting New England alone, for it is self-evident that if the water power of Vermont can be taken without its consent, then the same right would exist for appropriating any natural resource of any other state.
>
> I cannot help but feel that this situation is due to the insatiable desire of certain Federal authorities for more and more control of all of us and our possessions and resources, public and private—to what end? It is time that we face this issue for what it is and not confuse it with discussions of flood control, power control, or any other subterfuge.

Many of those present recalled that President Roosevelt, while governor of New York, had raised almost identical views about Federal invasion of states' rights in water power in his controversy with the Hoover administration over the development of the St. Lawrence river. But that was six years ago.

—M. M.

ADDRESS by Governor George D. Aiken of Vermont. Governors' Conference, Atlantic City, N. J. September 15, 1937.

The March of Events

FPC to Open Fire

A CAMPAIGN "to rid the electric industry of all unlawful intercorporate dealings and profiteering" through the medium of an inquiry into the lawfulness of existing interlocking directorates in public utility and related companies was announced on September 17th by Frank R. McNinch, former chairman of the Federal Power Commission (now with the FCC). Recently appointed by President Roosevelt to the chairmanship of the Federal Communications Commission, Mr. McNinch said he purposely delayed taking the oath of office in his new post in order that the investigation of power company directorates might be gotten under way.

Mr. McNinch was particular to stress that in his opinion the commission's determination upon the investigation represented a "vigorous policy." He said this was "because we know how vicious and antisocial are many practices of holding companies functioning through multiple officers." The chairman prefaced his remarks with a reminder that the commission was to have held its first hearing on applications of eight directors of companies in the Associated Gas and Electric System to continue to hold such offices on September 20th. Seven of the applicants, he said, had withdrawn their applications, a development which he considered "significant, without attempting to pass on the merits of the case."

In the conduct of its investigation Mr. McNinch said the commission would concentrate at the outset on the "larger of the system companies" in the belief that "if injury is being done to consumers and the public generally," the investigation would be given "wider effect due to the larger number served by the larger companies."

C. Edward Paxson, of Travis, Brownback & Paxson, counsel for subsidiaries of the Associated Gas & Electric Company, issued the following statement in response to the announcement made by Chairman McNinch:

"The only 'significant' thing about the resignations of the officers and directors referred to in the statement of the Federal Power Commission, on the eve of hearings on their applications for permission to serve various companies, is that it has at last evoked from the commission a clear-cut statement as to its future policy with respect to so-called interlocking directors and officers.

"The aim is, it appears, irrespective of the value to the companies and the public of the services as directors of men thoroughly acquainted with the industry and its problems, to drive them from their positions within a year or two. This policy is directly contrary to that followed by the Interstate Commerce Commission, which for years has administered an identical provision with wisdom and discretion and has, in only a very few instances out of the thousands of applications submitted to it, failed to approve . . . "

The Federal Power Commission subsequently called upon Mr. Paxson to show cause why he should not be barred from practice before that body because of his statement which, it was said, constituted an attempt to impugn the integrity of the commission. Mr. Paxson expressed regret that "anything should have occurred to threaten the continuance of the cordial relations which have existed for many years between the members of the commission and myself," and asked the commission to dismiss the citation to disbar him.

Mr. Paxson, appearing at the show cause proceedings, issued a statement of retraction and apology after which the commission dropped the citation of disbarment. Mr. Paxson assured the commission that he had no intention of reflecting upon the motives of the commission, or any member of it. He added that his statement had been somewhat impulsive and hasty and completed before he had had an opportunity to examine the commission release in full.

Mr. McNinch later stated that the commission, in dismissing the citation, had taken into consideration the record of Mr. Paxson. However, he added that the commission could not accept as a vindication the explanation that the statement had been prepared hastily.

It had been suggested in Mr. Paxson s original statement that the policy sponsored by the commission of making "numerous positions blossom where but one existed before" was of doubtful wisdom, economy, or efficiency in the management of privately operated industry.

President Starts Bonneville

PRESIDENT Roosevelt stood last month before the New Deal's $51,000,000 Bonneville dam site and coupled a promise to balance the budget in the next fiscal year with a policy of the "widest use" of the hydroelectrical energy to be developed by this and similar Federal projects. Then he pressed the button which started the first production of power from auxiliary equipment.

The President proposed that power should be diffused over the countryside as widely as possible, to remote farmsteads and to small communities so that they may enjoy modern electrical blessings and thrive. To that end he recommitted his administration to national "planning for the future in seven or eight natural geographical regions." Several bills to create Tennessee Valley Authority type developments in each section are pending before Congress.

Roosevelt reaffirmed his faith in the St. Lawrence waterway plans which were developed when he was governor of New York. He predicted that the waterway ultimately would be constructed.

Challenging those who accuse him of interfering with "the liberty of the individual," the President asserted, "my conception of liberty does not permit an individual citizen or group of citizens to commit acts of depredation against nature in such a way as to harm their neighbors, and especially to harm the future generations of Americans."

Some newspapers and some politicians, Roosevelt charged, have uttered "misleading and utterly untrue statements" that his national planning by regions "would set up all-powerful authorities which would destroy state lines, take away local governments and make what people call a totalitarian or authoritarian or some other kind of dangerous nationally centralized control."

He said his national planning was "decentralizing" instead of otherwise. He stated:

"In other words, the responsibility of the Federal government for the welfare of its citizens will not come from the top in the form of unplanned, hit or miss appropriations of money, but will progress to the national capital from the ground up—from the communities and counties and states which lie within each of the logical geographic areas."

Because of the President's definite siding with the "area-wide" proponents of cheap power from Bonneville as against the Portland area group which sought rate preferences by reason of the proximity of Portland to the dam site side, observers thought that there was no longer much doubt of the appointment of SEC member J. D. Ross as the new Bonneville dam administrator. Ross was generally supposed to favor an area-wide rate policy.

New Deal Disputed on Water Power

THE Committee of Utility Executives, official representative of the private utility industry of the United States, on September 27th issued a booklet containing quotations from the voluminous report of the President's National Resources Committee to prove that steam is a cheaper and more desirable source of electrical energy than water power.

The reply to the New Deal's argument that cheap power must come from development of the nation's hydroelectric resources, by quotation from a New Deal scientific treatise, came as the President toured the Northwest on a trip which took him to the various Columbia river developments representing gigantic national investment in hydroelectric power.

In effect, the purport of the utility committee's publication was to announce that the administration cannot fulfill its affirmed objective of providing cheap power because the cheapest power is steam power, which the Constitution forbids the Federal government from selling to the consuming public, it was said.

Ever since the Supreme Court upheld the right of the government to develop hydroelectric projects in conjunction with conservation and navigation projects, and to sell the power to pay for the public structures involved, the Federal agencies concerned with power development have emphasized that the sale of power is a mere incident to the more important programs of flood control, conservation, and navigation.

In the foreword, Philip H. Gadsden, chairman of the utility committee, stated:

"Study of these pages can lead to but one conclusion: that the administration's National Resources Committee has found that hydroelectric power is more costly than steam generated power. The Federal power program is concerned exclusively with development of hydroelectric power.

"Steam generation of power by the Federal government would be an unconstitutional invasion of the rights of the individual citizens, according to the admission before the Supreme Court by the administration's attorneys. It would follow, from the testimony of the administration's own experts, that the Federal power program is economically unsound."

TVA Wins Legal Skirmish

THE Tennessee Valley Authority on September 27th won a victory on points of preliminary procedure in the Federal court suit of 17 private utilities which are attacking the agency on constitutional grounds. The 3-judge court set the suit for hearing at Chattanooga on November 15th. Judge Florence Allen of the Circuit Court of Appeals, Cincinnati, emphasized that the court would expect the "coöperation" of attorneys in expediting the hearing.

Preliminary questions on which the TVA won were motions of the private utilities for court orders to do three things:

Permit attorneys for the utilities to take a deposition from Harold L. Ickes, Public Works Administrator, whose PWA has authorized loans to municipalities to construct electric systems in competition with existing utilities.

Permit the taking of a deposition from John

M. Carmody, Rural Electrification Administrator, whose REA has financed rural electric coöperatives.

Compel the TVA to produce or permit inspection of numerous maps, reports, estimates, engineering data, and the like.

All these motions were overruled.

Regarding a suggestion that a special master be designated to take certain testimony, Judge Allen said that this would not be done and that the 3-judge court "will hear it all."

Sitting with the Circuit judge, the only woman in the Federal judiciary, were District Judges John D. Martin of West Tennessee and John J. Gore of Middle Tennessee.

SEC Resists Test of Act

RESISTING efforts by the Electric Bond and Share Company and other public utility defendants to test the constitutionality of the Public Utility Holding Company Act as a whole, the Securities and Exchange Commission on September 20th filed a brief in the Second U. S. Circuit Court of Appeals continuing its defense of sections 4(a) and 5, the registration provisions, as separable and workable clauses of the statute.

The brief, it was said, dwelt heavily on the effectiveness of publicity, permitted under the registration provisions, in wiping out abuses in the utility industry. This also was a strong point made by Judge Julian W. Mack in his decision on January 29th last, upholding for present purposes the administration's policy and legal views on the act when it came before him for a first test in the District Court.

Defending Judge Mack's refusal to entertain a cross-complaint against the government, the brief charged that the defendants had come to court with "unclean hands because their prayer for affirmative relief is predicated on the fact that they have refused, without legal justification, to register." Pursuing this statement, the SEC asserted that the courts would be opened to "bitter partisan and political strife" if they considered hypothetical cases.

The brief insisted that the companies must register before they can test the act as a whole or any part of it, as Judge Mack held. The brief contended:

"The government no less than the defendants might secure definite advantages by having this court pass upon the validity of the act and each of its provisions, so that the commission could proceed with the administration and enforcement of the entire act and have its constitutional powers once and finally determined. Such an omnibus decision would undoubtedly eliminate a great deal of inevitable litigation."

ATA Convention

THE 56th annual convention of the American Transit Association and its six affiliate groups opened on September 20th at the Greenbrier Hotel, White Sulphur Springs, W. Va., bringing together 1,000 delegates representing 90 per cent of the local transportation industry of the United States and Canada.

These delegates represented the street car, bus, trolley coach, elevated, and subway companies of the two nations. With the representatives of these companies were delegates from the companies manufacturing and supplying the equipment with which these companies carry on their operations.

Thomas Conway, Jr., of Philadelphia, retiring president of the association, opened the first business session, discussing various problems and projects before the association. He was followed by Chester T. Lane, assistant general counsel of the Securities and Exchange Commission, who spoke on "Some Problems of Reorganization, Readjustment and Recapitalization." The day's session closed with an address by William L. Day, vice president of the J. Walter Thompson Co. of New York, entitled "What the Public Thinks."

Coördination of the various forms of transportation into a single efficient system was urged by ICC Commissioner Joseph B. Eastman in a subsequent address before the association. Commenting on the subject of coördination, the commissioner said:

"Before long we must find a way of starting on the job, which is 'coördination' or fitting the various forms of transportation into a system in which they will work with and for each other in every appropriate way and work against each other only within the limits of what may be termed a sane and healthy competition."

Discussing the Motor Carrier Act of 1935, Commissioner Eastman said that it was like most legislation dealing with a complex subject, it was imperfect and left many opportunities for construction and interpretation. Experience has shown the need for some amendments to the act, he remarked, and in due course they will no doubt be made.

Charles W. Chase, president of the Indianapolis Railways, was elected president of the association to succeed Thomas Conway, Jr. The convention elected A. J. Lundberg, president of the East Bay Transit Company, Oakland, Calif., vice president, and Edward A. Tuson, general auditor for the Public Service Coördinated Transport of Newark, Treasurer.

FCC to Probe "Dummies"

CHAIRMAN Frank R. McNinch of the Federal Power Commission assumed his new post as "trouble shooter" head of the Federal Communications Commission recently with his first task indicated as an inquiry into charges concerning creation of "dummy" broadcast corporations.

The charges concern alleged efforts by at-

torneys to obtain commission broadcast authorizations through use of a corporate "dummy." Taking temporary leave of his regular duties, Mr. McNinch will use the full authority given him by the President to investigate charges that have led to threats of a congressional investigation of the communications body.

The commission has alleged that George S. Smith and Paul M. Segal, Washington attorneys, have established "dummy" corporations and represented "dummy" clients in efforts to obtain authorizations. Both have entered full denial of the charges, which were scheduled to be thrashed out in a hearing early this month.

SEC Has New Chairman

WILLIAM Orville Douglas was elected unanimously on September 21st as chairman of the Securities and Exchange Commission to succeed James M. Landis, who recently retired, at a meeting attended by Commissioners Mathews, Healy, and Ross. Mr. Douglas, who succeeded former Chairman Joseph P. Kennedy as a member of the commission in January, 1936, was in New Haven on vacation when the vote was taken.

The new chairman, who became the third man to head the commission, first became prominent at the SEC as the director of its protective committee studies. Since that time he has been active in advocating bankruptcy and protective committee legislation introduced at the last session of Congress. While none of the bills was adopted, the administration will press for their passage when Congress reconvenes and the important part that they would play in the future work of the SEC was one of the factors which led to his selection, it was said.

Alabama

Seeks Ban on Power Funds

SUIT to enjoin the Federal Rural Electrification Administration from advancing financial aid to a coöperative enterprise planning distribution of electric power in Cherokee and De Kalb counties was brought on September 21st in the U. S. District Court in the District of Columbia by the Alabama Power Company.

The power company asked that the government be restrained from advancing $310,000 applied for last February by the Cherokee County Electrical Membership Corporation for construction of a generating plant and distribution lines in those counties.

Charging that 40 per cent of the mileage of their lines in both counties would be paralleled by distribution lines now planned by the coöperative agency, attorneys for the Alabama Power Company told the court that a $91,000 investment would be endangered. The suit further alleged that the Cherokee Corporation would not build a generator but purchase power from the TVA which would be a violation of the REA act.

Arkansas

Agree on Rate Cut

CUSTOMERS served by the Oklahoma Gas and Electric Company in northwest Arkansas will save $34,141.73 annually under terms of a rate reduction, effective October 1st, the state utilities commission announced last month. Commission Chairman Thomas Fitzhugh said consumers would begin to benefit under the new rate after using 22½ kilowatt hours of power. Company records show that the average consumption of power in the area in July was 51.9 kilowatt hours per customer.

The minimum charge remains at $1 for 10 kilowatt hours. Twenty kilowatt hours cost $1.60 under the new rate compared to $1.59 under the old schedule, but 25 kilowatt hours cost $1.91 as against $1.90 and 50 kilowatt hours cost $2.80 compared to $3.36 under the old schedule. The reduction was agreed upon following several conferences.

California

Backers Hit Opposition

FALSE and misleading propaganda is being put out by interested parties in an effort to defeat approval by San Francisco's voters of the rapid transit bond issue on the November 2nd ballot, the Rapid Transit Citizens' Committee, sponsoring the transportation

bonds, charged recently. The committee also charged that the Market Street Railway has joined in the move to attempt defeat of the rapid transit bonds.

An official warning from the citizens' committee declared:

"Opponents of the rapid transit bonds are arming their speakers with a 53-page mimeographed pamphlet labeled 'An Analysis and Study of the Proposed Subway Plan' from which to quote in their appeal to clubs and civic organizations urging opposition to the $49,250,000 bond issue for subways which goes to the voters November 2nd. This pamphlet quotes no engineer as its author nor does it reveal its source. It is an orphan child with no signature or address."

Proposes Plant Construction

THE Sacramento Municipal Utility District recently filed application with the Federal Power Commission for a preliminary permit to construct a 201,000 horsepower hydroelectric project in Eldorado county, on Silver creek and the south fork of the American river.

The district proposed two steps, construction of two storage reservoirs connected by a tunnel, a diversion dam, a conduit, and building of a power house, to be known as the Brush creek development, which will have an installed capacity of approximately 50,000 horsepower.

Ultimate development, the applicant stated, would consist of the enlargement of the two storage reservoirs, and the construction of two additional diversion conduits and two additional power plants, to be known respectively as the Big Bend and Chili Bar plants, which will raise the total installed capacity to an aggregate of 201,000 horsepower.

Service Area Extended

ENLARGEMENT of extended-area telephone service in 9 districts of the Los Angeles area and extension of toll-free calling areas in 12 other districts—providing lower rates and greater extended area service to subscribers of the Southern California Telephone Company — were announced on September 14th by Wallace L. Ware, president of the state railroad commission.

Extended-area service, it was explained, is a service whereby subscribers to the plan may call toll free into adjacent telephone exchange areas at a slight additional monthly cost. Rate reductions for this type of service in many districts will be substantial, and the commission staff estimated the new plan would mean a decrease in the telephone company's revenue of $275,000 annually.

The present plan, which has occupied commission investigation for the last several months, will go into effect on three separate dates as follows:

On October 11th, the service was to be placed in effect in the Roscoe district of the Burbank exchange and then Canoga Park, Reseda, and Van Nuys. On that date reductions in the rates and extension of the service available would become effective in Beverly Hills, Compton, Hynes, Gardena, Hawthorne, Inglewood, North Hollywood, and Culver City. The two base rate areas in the Compton-Hynes-Gardena exchange were to be enlarged to afford lower rates to those customers previously outside the base rate areas.

On November 21st the service will be inaugurated in Arcadia, La Crescenta, and El Monte, while in Burbank, Glendale, Montebello, and Pasadena the rates will be reduced and the service areas extended. The base rate area of the Laurel district in Pasadena will be enlarged on that date to include virtually all residential development there.

January 1st, in conjunciton with the Associated Telephone Company, which serves Santa Monica and West Los Angeles, extended-area service will be placed in those districts, while Beverly Hills and Culver City will be provided with toll-free calls into portions of the Associated Telephone Company's territory.

At that time, the base rate area in the Roscoe portion of the Burbank exchange will be materially extended to take in practically all developed areas, eliminating mileage charges to subscribers outside the present base area.

Kansas

Gas Company Sues

THE Gas Service Company, of Wichita, filed a suit in district court on September 17th seeking to set aside a $25,000 municipal gas plant bond issue voted by the city of Sedgwick and a gas purchase contract signed by the city with the Drillers' Gas Company. The petition contends the bond issue, voted June 15th, should be set aside because voters "were led to believe they were voting for a municipal gas plant when in reality they were voting only for the physical properties of such a plant."

The action alleges the gas purchase contract is illegal because it violates the Kansas cash basis and budget law.

The petition stated that the city council entered into a contract with the Drillers Gas Company to purchase 20,000,000 cubic feet of gas the first year and 30,000,000 cubic feet each year for nineteen years thereafter. Un-

der terms of the contract, the petition stated, the city will be liable for approximately $120,000, the city agreeing to pay for the amount of gas contracted for regardless of whether it is used. The Gas Service Company now serves Sedgwick with natural gas.

Kentucky

Utility Seeks Court Order

THE Kentucky Utilities Company on September 14th asked a restraining order to prevent the city of Middlesboro from erecting a power distribution system or from taking steps toward obtaining TVA power. In a petition filed in the Bell circuit court the power company asked that the mayor and commissioners be restrained from selling or offering for sale $175,000 in revenue bonds for the building of the system.

The fight between the Kentucky Utilities Company and officials of Middlesboro has been smoldering for some time following defeat of all municipal power advocates who were candidates at the August primary. Reports following defeat have been current that steps would be taken immediately to sell the bonds and start erection of the system before the present officials retire January 1st. The power company, apparently fearing such a move, filed the petition for a restraining order to bring the entire matter to a head.

It was contended in the petition that the new TVA contract offered Middlesboro calls for a minimum payment the first year of $15,000; $40,000 the second year, and $60,000 the third year. The petition then states that the requirements for the third year and thereafter are incapable of being met by the city. The largest amount ever consumed was 4,828,400 kilowatt hours in one year and the new contract would call for a minimum of 11,503,200 kilowatt hours, it was stated. The petition further said that city officials were soliciting power contracts from coal companies outside the city limits, and that this was illegal.

The restraining order was asked against Mayor Ike Ginsburg, Commissioners H. B. Stallard and Joe Johnston, representing the city.

Michigan

State Sues Utility

THE state on September 15th filed suit in Ingham circuit court against the Consumers Power Company, beginning the first legal battle between the utility companies and rural electrification projects in Michigan. The suit, filed by the attorney general in behalf of the state public utilities commission, charged the Consumers Power Company with violating orders of the commission in connection with construction of rural power lines in Eaton and Ionia counties near the village of Mulliken. A restraining order was sought which, if granted, would leave the field to the Tri-County rural line project.

The Consumers Power Company and the REA coöperative began work in this field at approximately the same time. The question as to which actually was first is one to be determined by the court.

The bill of complaint charged the power company violated the utility commission order of May 17, 1937, to the effect that no utility shall construct, or extend, a power line without first filing notice of its intention and obtaining approval of the state commission.

It also was charged that the company made an illegal crossing of the REA line and that it violated another order of the commission by purchasing right-of-way for its lines.

Discrimination also was charged to the company. The bill said that the company had constructed lines in communities where the service was requested. Approximately 250 customers were to be served by each party.

Mississippi

Favors TVA Power System

COLUMBUS voted on September 14th to issue $281,000 in bonds to buy or build a distribution system paving the way for use of TVA power. Less than 40 per cent of the voters went to the polls.

The vote to issue $84,000 in bonds to build a system to distribute power to public buildings, street lights, and other municipal uses was 689 to 74. The vote for issuing $197,000 in bonds to build a system to serve commercial and domestic customers was 661 to 71.

Fears held in some quarters that the bond

election might be invalid were dispelled recently when a nationally known firm of bond attorneys declared the election was valid. The official notice was ordered published only one time, although such notices are usually printed three times. The opinion, however, pointed to a law passed by the state legislature in 1936, changing requirements.

Nebraska

Will Finance Project Privately

COUNSEL for the city of Columbus in its move to finance a municipal electric distribution system prepared to go ahead with private financing after the Northwestern Public Service Company brought action on September 20th to enjoin the Public Works Administration from making a $400,000 loan and grant to the city.

Charles H. Sheldon and C. J. Garlow, special counsel for the city on the municipal project, and City Attorney H. D. Hunter joined in a statement saying the utility's action was "not unexpected since it is in line with the general policy of private companies to hinder and delay" construction or purchase of electric systems by municipalities.

The PWA approved a $400,000 grant and loan last August 24th, but the original application has been changed by the city to a grant only for $180,000. The attorneys said if this grant cannot be obtained because of the action of the utility company against Harold L. Ickes, PWA administrator, "we can still finance the system privately."

A suit is pending in the district court at Columbus challenging the constitutionality of S. F. 25, under which the city was authorized to issue revenue bonds for the construction or purchase of a distribution system. The suit also challenges an election held a year ago under which the voters approved a $250,000 bond issue to construct a system or purchase existing facilities of the Northwestern Public Service Company.

New York

New Schedule Approved

CONSUMERS of the Rockland Light and Power Company will save about $102,000 annually through revised rates which the company filed last month with the state public service commission and which were approved by that body, effective October 1st.

The revised electric rates affect the entire territory of the company which includes the cities of Middletown and Port Jervis, the villages of Bloomingburg, Grand View, Haverstraw, Hillburn, Nyack, Otisville, Piermont, Sloatsburg, South Nyack, Spring Valley, Suffern, Unionville, Upper Nyack, West Haverstraw, Wurtsboro, and a large number of towns in Rockland, Orange, and Sullivan counties.

Of the $102,000 annual saving, almost $57,000 a year will be saved by customers in the eastern division of the company's territory. Changes in the rates will not increase the bills of any consumer in the territory, it was said. In some cases, the commission pointed out, slight increases occur to certain users in the western division of the company's territory. The revised residential rates will save domestic users in the eastern division about $12,000 a year, and will save domestic users in the western division about $19,000 a year. Changes in the commercial rates will save eastern division customers nearly $30,000 annually and western customers about $26,000.

The revised residential rate contained changes in unit charges and block length beyond the initial block as compared with the rate to be superseded. The minimum charges of the rate remain the same and are $1 a month for the general service, but not less than $6 for the period; with a range or waterheater the minimum is $3 a month and not less than $18 for the period, and with a range and waterheater the monthly minimum is $3.50 but not less than $21 for the period.

Seek Tax Refund

TWO transit corporations of New York city on September 24th appealed to the U. S. Supreme Court in an endeavor to recover taxes which they paid the city under state laws permitting the taxing for unemployment relief of a public service utility holding a franchise from the city. The tax imposed was 3 per cent upon annual gross income.

The New York Rapid Transit Corporation and the Brooklyn and Queens Transit Corporation brought the appeal from the New York State Supreme Court. At the last term the U. S. Supreme Court denied a petition of the Third Avenue Railway involving the same principle.

Operating expenses of the street railroad corporations are far higher, in proportion to gross receipts, than those of other corporations included under the tax law, the transit

corporations state in their appeal. It was contended that the ratio of net income to gross receipts is higher in the case of all other types of utilities.

The New York city laws, the petition said, produce gross inequality in the distribution of the tax burden, taxing all street railroad corporations "far more heavily upon their respective net incomes than other utilities within the taxed class."

The taxes in question, the petition added, "are not for the support of the government but are to be used exclusively for the purpose of unemployment relief."

Oklahoma

Grand River Dam Approved

OKLAHOMA'S Grand river dam—a great hydroelectric and flood control project in the northeast corner of the state—became a practical certainty last month when President Roosevelt finally approved a $20,000,000 public works allotment.

Representative Wesley E. Disney of Tulsa, who has steered the project successfully through the maze of Washington legalism, made the announcement that the President had given the "go ahead" signal. Disney was confident actual operation of the dam would be an accomplished fact by the spring of 1940.

The allocation consists of a loan of $11,563,000 and a grant of $8,437,000, to the Oklahoma Grand river dam authority.

Both Disney and the PWA emphasized that the project is to be self-liquidating. Money derived from what Disney said is to be cheap power is to pay off bonds which the Grand river dam authority will issue. The PWA said:

"This will be a multiple purpose, self-liquidating, conservation project and will control, store, and distribute the waters of the Grand river and its tributaries for the purpose of flood control, irrigation, recreation, and hydroelectric development."

A dam will be built near Pensacola, Okla., in Mayes county. Disney said the proposed hydroelectric plant will be composed of the 25,000 kilowatt capacity turbo-generators, capable of delivering approximately 175,000,000 kilowatt hours of firm power annually.

Pennsylvania

To Fight "Monopoly"

THE state public utility commission on September 17th considered a proposal to smash the "monopoly" held by Western Electric Company on equipment supplied by the Bell Telephone Company of Pennsylvania. Commissioner Donald M. Livingston said he was studying a plan to compel the Bell Company to establish outside connection with any "private telephone communication system" in the state.

The plan would permit state and municipal governments, corporations, or other large users of telephone service to buy their own equipment rather than rent instruments from the Bell Company. Commissioner Livingston stated:

"It is a well-known fact that the Western Electric Company has a monopoly on the manufacture of instruments supplied by the Bell Company. Subscribers now pay a continuous rental for telephone instruments and never get to own them. The Bell Company is owned by American Telephone and Telegraph, which also owns part of the Western Electric. So the Bell people would refuse to make connection with a privately owned system on the ground they couldn't provide proper maintenance."

The commissioner explained the new utility law empowers the state public utility commission to carry out the provisions of the plan. He said that until the law was passed the commission had no jurisdiction over the companies that supply telephone equipment.

Commissioner Livingston contended the proposal would encourage other companies to manufacture equipment in competition with Western Electric, forcing the price of the instruments down. In addition to huge savings for large users, he claimed, destruction of the Western Electric "monopoly" would ultimately result in large savings for small consumers.

Plans Power Rate Simplification

SIMPLIFICATION and standardization of rate schedules of all electric companies in Pennsylvania were proposed recently by Public Utility Commissioner Richard J. Beamish. Beamish, who has made a short survey of the Swedish electric system, said he would recommend to the state commission that it call a conference of representatives of all electric companies for that purpose. He stated:

"Simplification of rate schedules is necessary so that every householder will be able to read and understand the electric bill he is

getting every month. This is as necessary as ascertaining the exact cost of production and distribution of electricity in Pennsylvania; something else every Pennsylvanian ought not to have hidden from him."

Beamish studied the entire utility regulatory system in Sweden and said he brought back scores of suggestions that could be applied in Pennsylvania by the utility commission to good advantage. He said:

"Although I looked into all utilities, I paid particular attention to rural electrification. Pennsylvania's rural element is paying prohibitive rates for electric service. There is no reason why these should not be reduced and electricity be made available for all farmers.

"I believe it entirely feasible that the entire state be electrified for the farmers' use and we will work toward that end. I think that rural electric rates should be uniform, that one farmer should not be forced to pay higher rates just because he lives farther away from the source than others. The entire farm population should pay the immediate cost and then equal rates."

Discovers Tax Error Too Late

DISCOVERY of a 40-year oversight in payment of its city taxes on September 15th gave the Reading Steam Heat & Power Company a long-range view of an error which cost $800,000.

For two decades the utility paid the city about $20,000 in taxes annually, unaware that it could claim exemption on the grounds it was a public service company. No refund now can be obtained.

Court proceeding involving 1937 taxes resulted in the city council granting exemption on properties used for utility purposes.

Virginia

Co-op Gets REA Loan

THE only electric coöperative in Virginia that is building its own generating plant, the Shenandoah Valley Electric Coöperative, on September 16th received authority from the state corporation commission to borrow $35,000 additional from the Rural Electrification Administration. This brings the total authorizations for this co-op to $487,000.

The coöperative is planning to serve farmers in Augusta, Frederick, Page, Rockingham, and Shenandoah counties. The lines will cost about $350,000.

Other similar organizations are buying power rather than generating it.

New Accounting Proposed

PROPOSALS to alter the standard method of accounting of Virginia gas and power companies were laid before representatives of these corporations last month by the state corporation commission in an informal conference. It was proposed to exchange for the present plan, in effect since 1921, a system recommended by the National Association of Railroad and Utilities Commissioners.

Explaining the need for an up-to-date system, Charles C. Drummond, chief accountant of the commission, said it was the desire and hope of the commission that an agreement might be reached on a standard plan.

West Virginia

Utility Question Sent to Commission

THE state attorney general's office recently referred to the public service commission the question of whether rural electric power coöperatives are public utilities. The statement came in reply to a question by Road Commissioner Burr H. Simpson on whether the coöperatives could be permitted to erect poles and lines on right-of-way of the state road system.

The commission declined to comment on the statement, but members pointed out informally that the courts had held coöperatives were and were not utilities in separate cases. The Hardy County Light and Power Company had requested permission from Road Commissioner Simpson to proceed with erection of equipment for which Federal funds have been allocated in Hardy county. The opinion stated:

"From the meager information at hand it appears that this association is financed by the Rural Electrification Administration, that it has in the neighborhood of 500 members, and that anyone may become a member of the association on the payment of an initial fee of $5.

"The association contends that it is not a utility, person or corporation furnishing services to the public, within the meaning of the acts of the legislature of 1935."

The attorney general declined to submit an opinion on whether the organization, which had planned to erect power lines to supply its own members, is a utility.

The Latest Utility Rulings

Pendency of Commission Investigation Bars Municipal Rate Action

UNDER the laws of Ohio municipalities have authority in the first instance to establish gas rates by ordinance. Provision is made for appeals to the commission from such ordinance rates and for the fixing of rates by the commission when no ordinance rate is in effect. The Ohio commission has held that under the applicable statute a municipality is without authority to establish rates by ordinance when, following expiration of a rate ordinance, the company has asked the commission to determine rates and the commission investigation is still undisposed of.

Chairman Schaber, in a dissenting opinion, discussed at length the Ohio plan of rate regulation and the respective powers of the state commission and the municipality. He concluded that under a statutory provision authorizing municipalities to regulate rates "from time to time" the municipality had power to enact a rate ordinance notwithstanding any pending proceeding before the commission. This power to regulate rates, in the opinion of Chairman Schaber, is absolute and is not lost by reason of the utility company's invocation of the jurisdiction of the commission upon application to fix rates. He contended that the utility act did not apply to any rate fixed by a municipality other than a review thereof by the commission and that when a rate had been established by municipal authority, this is true "whether the ordinance was passed and effective prior to or after the filing of an application by a public utility" for a rate determination by the public service commission. *The Ohio Fuel Gas Co. v. City of Norwalk (No. 10,071).*

Service Contracts with Affiliates Must Be Supported by Proof of Cost

THE New York commission, in disapproving proposed management and engineering contracts between affiliated interests on the ground that the Public Service Law specifically rules out any charge in excess of the reasonable cost of performing the service, held that a rigid standard of proof of the necessary costs incurred should be set up and services not performed for the use and benefit of the subsidiary should not be included in the costs charged the subsidiary. The contracts under discussion were between two water companies and the American Water Works Construction Company and the American Water Works and Electric Company, the latter a holding company holding through intermediary companies stock in the operating companies.

The contracts provided for allocation to various subsidiary companies of the costs incurred for management and construction services on the basis of gross revenue. The commission pointed out that no method was available so that the commission might ascertain either the accuracy or the reasonableness of the allocation. Aside from what the commission characterized as the "arbitrary character of the allocation of expenses to waterworks operation," the distribution of the total thus allocated in proportion to gross revenues of the respective properties was

said to be equally arbitrary; it might bear no direct or ascertainable relation to the services performed for the particular operating company. The commission suggested that if an arbitrary basis of allocation were to be adopted, distribution in proportion to the operating expenses would seem more logical than one based upon revenues. It was said in part:

> Gross revenue is an irrational basis for spreading operating supervision costs. An increase in rates would tend to increase the amount paid for operating supervision by a particular utility while a reduction in rates would have the contrary effect. The mere change in rates would require no related change in the amount of operating supervision furnished but would affect its cost. To further illustrate the situation, assume two subsidiaries of the American Company had rate changes, one up and the other down, and of equal effect on revenue, the total fee billed by the American Company would be unchanged but the amount charged against consumers in the respective areas would be increased in one case and decreased in the other, probably without any change in service performed for either.

With respect to the engineering contract the commission saw no valid reason why the billings for engineering service should not be based strictly on the service rendered to the particular subsidiary. A scheme of spreading engineering costs uniformly over all work done for all companies as a percentage of total construction by all companies appeared to be both unreasonable and unsound. It was said:

> The amount of engineering required from the home office for main extensions may be quite different from the amount and cost of the engineering required in the construction of a pumping plant or purification plant costing the same as the main extension. Total dollars expended, regardless of character of work, should not be determinative of the charge made the subsidiary. Direct engineering should be directly charged to particular jobs and if necessary general supervisory services could be spread according to direct charges and costs.

The conclusion was reached that proof is insufficient which merely shows that services rendered are valuable and necessary, that the charge made is less than the cost of comparable service obtainable elsewhere, that persons rendering the service are unusually competent and intimately acquainted with the property, or that the organization which furnishes the service claims to render such service at a loss to itself. *Re New Rochelle Water Co. et al. (Case Nos. 8839, 8840, 8920, 8921).*

Texas Commission Establishes Rates for Natural Gas Distribution

THE Texas commission reviewed rates established by the city of Fort Worth for the Lone Star Gas Company, and after considering fair value and operating expenses fixed a new schedule of rates. A return of 6 per cent was held proper as the company was operating in a city which was growing and prosperous and which had a citizenry "keenly aware of the conveniences resulting from the use of natural gas." The company was said to occupy a strategic position in the matter of conducting a stable public utility business.

In determining a proper rate base, the commission rejected "purely hypothetical estimates" where facts were available. An estimate of reproduction cost on the basis of piecemeal construction was criticized as a "hybrid or mongrel method of purporting to reproduce the plant new," where the witness had resorted to piecemeal construction in arriving at some of his unit costs.

Criticism was made of an assumption that the system would be incorporated, in an estimate of reproduction cost, since the distribution system was merely a division of a widely spread gas transmission corporation. The commission said:

> Why should the company be allowed to reproduce the system as a corporation when it has been operating for years as only a division of a large transmission corporation? If the present method of distributing gas in

the city could to advantage be improved or economies be effected by making the division of the company a separate corporation, we take judicial knowledge of the fact that the interested parties of the affiliated group would be the first to recognize the desirability of incorporating the system.

Inclusion in the rate base of contributions for extensions was criticized so far as these represented extensions at a high cost outside of the city involved in the rate case, but on the question of allowing such contributions generally the commission said that there was no obligation on the company to refund any part of the amount contributed and the company had absolute title to the property. The commission believed "the method by which the company acquired its property is not determinative of whether it should be included in the rate base."

Expenditures by the company for dues, donations, contributions to various organizations, and for furthering the sale of appliances were disallowed as operating expenses. The commission took the position that while the company might expend from profits or surplus amounts for donations and dues, it could not set itself up "as the self-appointed dispensing agent for the consumer in the matter of charitable donations" and reap whatever benefit it might thereby acquire by such a policy. It was pointed out that the citizens might not entirely agree with the company's judgment in selecting objects of charity.

No allowance was made for losses through uncollectible accounts as the company had the right to require sufficient deposits for its protection from all its consumers. It was said that since the company had the means of protecting itself against losses of customers' accounts, the commission could not see the fairness or necessity of requiring the ratepayer to bear the burden of losses. *Lone Star Gas Co. v. City of Fort Worth (Gas Utilities Docket No. 108).*

Commission Lacks Power to Prevent Payment of Dividends

THE New York commission, according to a supreme court decision, has no power to prevent a public utility company from paying dividends on common stock declared prior to a prohibitory order of the commission. This ruling was made in a suit by common stockholders for the amount of dividends declared by directors of the Rochester Gas and Electric Company in July and August, 1936.

The corporation in July, 1936, petitioned for authority to issue cumulative preferred stock. The commission authorized the issue with the express condition that the company should not declare or pay dividends on its common stock until conclusion of a pending rate case. The corporation, in contesting the case brought by the stockholders, did not dispute that the two dividends were payable eventually but contended that they could not be paid while the public service commission order was in effect. Supreme Court Justice Clyde W. Knapp held that the clause of the order in so far as it attempted to restrain the dividend payments was beyond the commission's jurisdiction. *NY Pa NJ Utilities Co. v. Rochester Gas & Electric Corp. (N. Y. Sup. Ct.).*

Corporation Cannot Be Resurrected to Transfer Certificate

A CORPORATION holding a certificate authorizing motor carrier transportation decided to go out of business on account of the depression and a lack of finances. It went out of business in 1933 and was declared defunct and inoperative by the secretary of state in 1936. It made application in 1937 for authority to transfer its certificate to another. In the meantime the transferee sold it an

automobile so that it might procure insurance thereon and file this with the commission to give the appearance of life in and activity by a "nonexistent corporation."

The Colorado commission refused to approve the transfer of the certificate and held that abandonment of operations and lack of capacity on the part of the corporation to operate warranted its revocation. The commission made this statement:

> Under our rules and regulations, where a corporation is the applicant for a certificate of public convenience and necessity, it must file a certified copy of its Articles of Incorporation, not only showing that it is authorized to, but is exercising its corporate rights and privileges and that, among its corporate rights and privileges, it is authorized to engage in a transportation business. Apparently applicants think that if applicant was qualified when it applied for and received certificate, its right to exercise and transfer the privileges granted by certificate is not affected by its dissolution.

Re Swift Moving & Storage Co. (Application No. 1295-A, Decision No. 10347).

Water Lease Arrangement Relieves Municipal Plant of Public Utility Obligation

THE Colorado commission last spring held that the city and county of Denver in furnishing water to customers beyond city limits was acting as a public utility and could not discontinue such service [18 P.U.R.(N.S.) 466]. The commission has now decided, on rehearing, that the right of the municipality to continue furnishing water service outside of territorial limits as a private contractor or lessor should be recognized.

Representations were made upon the rehearing that if the municipal plant was required to act as a public utility outside of the territorial limits the city must discontinue service to some 20,000 inhabitants in the territory surrounding Denver which would work incalculable hardship on these inhabitants, who could not for a reasonable price obtain any other adequate supply, and property valued at many millions of dollars would be destroyed unnecessarily, lands would be laid waste, tourists would be frightened away, and the welfare of the state would be jeopardized.

The original order was based largely upon the authority of the case of Star Investment Co. *v.* City and County of Denver, P.U.R. 1920B, 684, where it was held that the public utility status continued to attach to service formerly rendered by a public utility company even after the plant had been acquired by the municipality. The commission deemed it in the public interest to distinguish that case by recognizing the leasing arrangements which the city had subsequently required from all its extraterritorial consumers. This disposition of the case, however, was made subject to the provision that in such service the municipal plant would be subject to commission jurisdiction whenever service came in competition with any existing or hereafter created utility. *Re City and County of Denver, et al. (Case No. 1994, Decision No. 10497).*

Discriminatory Treatment of Customers Having Electric Kitchens

THE public utilities commission of the District of Columbia denied approval of a rule providing that an electric company would extend at its own expense service up to and including the service control switch to give service to kitchens containing an electric range and an electric refrigerator in individual dwellings or throughout an apartment building. The commission concluded that

this rule would be unduly discriminatory in both form and substance and that the classification which the company would accomplish by the application of the rule would be unreasonable.

The purpose of the proposed rule was to encourage and facilitate the installation of electric kitchens, thereby increasing the utility business of the company. It was testified that the rule if put into effect would make service more available to consumers and thereby benefit them and would have a tendency to lower the rates and make the business more attractive for both the company and the consumers. The probable effect and benefit of the rule, the record disclosed, would be limited to new buildings because the expense of wiring a building already built would be great, and an owner having invested money in another form of kitchen would not be likely to tear it out and put in an electric installation.

The commission, although recognizing that only unreasonable discrimination is unlawful and that reasonable competition under proper conditions is lawful and should be encouraged, declared it unlawful for a utility to exact through rates from all uses amounts for the private use or benefit of a class, which, it was said, would be the result of the operation of the rule proposed by the company and the inclusion in the rate base of the cost of property installed. The opinion said:

> The decisions hold also that even where competition is carried on through reduced rates, it should at all times be made certain that those not within the reduced-rate class be not burdened with "the slightest additional cost or charge" due to the reduced rate. . . . May the company limit the class entitled to the contribution under the rule to those who install both electric ranges and electric refrigerators?
>
> Is there a reasonable reason for such a classification? Should the company be permitted to provide and charge different rates as between its domestic customers using electricity for both range and refrigerator and those using it only for range *or* refrigerator? Would not such classification as between domestic consumers be unreasonably discriminatory? And if such discrimination cannot legally be accomplished directly, can it be indirectly through bonuses or installation contributions or concessions?

Re Potomac Electric Power Co. (Formal Case No. 273, Order No. 1627).

California Commission Exercises Power to Punish for Contempt

COMMISSIONS, as regulatory bodies, usually lack the power exercised by a court to punish for contempt. In California, however, the commission is given power by statute to punish for contempt in the same manner and to the same extent as courts of record. This power was recently exercised in the case of one who had disobeyed a commission order to cease and desist activities as a passenger stage operator without a certificate.

The commission ruled that its power to promulgate an order of this sort was well established; that a mere lapse of time since the rendition of the order was not sufficient to bar a contempt proceeding; that all the facts appearing in a complaint are not required to be within the personal knowledge of the person making the verification, but that they might rest in part at least upon information supplied by others.

Compliance with the License Tax Act of 1933, it was held, does not authorize operation as a common carrier in the absence of a certificate. Compliance with the License Tax Act was said to be immaterial. Moreover, the commission ruled that the establishment and observance of a regular schedule was not an essential attribute of the common carrier, serving to distinguish it from a private carrier. *Re Galik et al. (Decision No. 29936, Case No. 3371).*

Other Important Rulings

THE Wisconsin commission found that a proposed installation of centralized traffic control with remote control for an interlocking plant was consistent with the public safety and, therefore, the commission must approve the proposed installation, notwithstanding objections by the Order of Railroad Telegraphers, that the installation would be "unsocial" in that it might displace railroad employees and that it was unnecessary. *Re Chicago, Milwaukee, St. Paul & Pacific Railroad Co. (2-R-681).*

The supreme court of Minnesota held that two freight houses operated for the receipt and delivery of less-than-carload freight were "stations" within the meaning of the statute and might not be closed without the permission of the commission. *Minnesota Transfer Railway Co. v. Railroad and Warehouse Commission (274 N. W. 408).*

The Colorado commission denied a rehearing in a case where it had revoked operating authority of a motor carrier for unlawful practices although it was urged that another had acquired an interest in the business. The commission pointed out that the other party should not have parted with his money until the transfer was authorized. Operation under the permits without permission or authority of the commission was unlawful and he should not be allowed to predicate any claim of right upon such unlawful operation. *Re Shull (Case No. 2006, Decision No. 10342).*

The Minnesota commission, in dismissing an application for authority to increase telephone rates, was of the opinion that annual reports purporting to show book cost but not revealing the manner in which the book cost was determined did not constitute evidence on which to base a finding as to fair value. *Re Bertha Telephone Co. (M-2367).*

The Minnesota commission held that a rate of 75 cents per month for special reference listing in telephone directories styled "If No Answer Call" was unreasonable and not supported by the evidence, and that a rate of 25 cents per month per listing would be sufficient to reimburse the company for all costs to it in rendering this service. *Re Tri-State Telephone & Telegraph Co. (M-2364).*

The Pennsylvania commission approved the transfer of water utility property to a borough, with the statement that the commission is in full sympathy with the idea of municipal ownership and operation of so vital an adjunct to healthful and prosperous community life as a waterworks system if it can be acquired at a reasonable price and can be financed at minimum expense. *Re Upper Dublin Water Co. et al. (Application Docket Nos. 35426-35428).*

The supreme court of New Hampshire upheld the validity of an ordinance requiring operators of taxicabs to equip their cabs with taximeters, under a statute authorizing cities to license and regulate porters, cartment, and cartage, runners for boats, stages, cars, and public houses, hackney coaches, cabs, and carriages and their drivers. *State v. Guertin (193 Atl. 237).*

The supreme court of appeals of West Virginia held that where ratepayers alleged that they had been required by a utility to pay charges in excess of the legal rates in effect at the time such charges were made and sought to recover the excess, a judicial question determinable by the courts was presented and this was in no wise contingent upon a preliminary inquiry by the commission as to whether the rate charged was in excess of a reasonable rate. *Charleston Apartments Corp. v. Appalachian Electric Power Co. (192 So. 294).*

NOTE.—The cases above referred to, where decided by courts or regulatory commissions, will be published in full or abstracted in *Public Utilities Reports.*

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PUBLIC UTILITIES REPORTS

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Public Utility Commission

v.

Duquesne Light Company

[Complaint Docket No. 11405.]

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[August 17, 1937.]

INVESTIGATION *instituted upon motion of Commission to determine reasonableness of electric rates; temporary rate reduction ordered.*

By the COMMISSION: The Commission, on June 7, 1937, instituted an inquiry and investigation upon its own motion for the purpose of determining the fairness, reasonableness, and justness of the rates and charges of the Duquesne Light Company. There was included within the scope of this inquiry and investigation and notice thereof the consideration of the imposition of temporary rates under the provisions of § 310 of the Public Utility Law. A hearing was held in Pittsburgh on June 17, 1937, and further adjourned hearings were held in Pittsburgh on June 18, June 24, June 25, July 8, July 9, and July 22, 1937.

Duquesne Light Company, which serves electricity to the public in the city of Pittsburgh and in contiguous territory in Allegheny and Beaver counties, has filed with the Commission a tariff containing 15 schedules under which tariff it serves approximately 325,000 consumers. It is to be noted that approximately 96 per cent of its consumers are served under only three of its tariff schedules, schedules "C," "V," and "W." The record in this proceeding consists of more than 492 pages of direct testimony and, in addition thereto, 70 separate exhibits introduced by the Commission and two exhibits introduced in behalf of the respondent company. These exhibits, with a few exceptions, are statistical analyses and reports of the financial operations of the Duquesne Light Company prepared by or under the supervision of officers of the company from the books and records of the company.

This proceeding is fundamentally a

rate proceeding for the purpose of ultimately determining the fair valuation of the property of the respondent used and useful in its public service, and whether or not the present tariff is fair and reasonable and is producing to the company a fair return on such fair valuation.

[1, 2] The Public Utility Law, in § 310, empowers the Commission to establish in a proceeding such as this, if it be of opinion that the public interest so requires, temporary rates to be charged pending the final determination of the proceeding. It is the opinion of the Commission in this proceeding that the public interest requires temporary rates to be forthwith prescribed. It becomes our duty to examine the record and to determine the rate to be prescribed, in compliance with the provisions of the statute. We make the observation at this time that in this case no attempt is made to translate into the reduction herein ordered matters that are in substantial dispute, and we preserve for more minute study and future determination those matters wherein there is a genuine difference of opinion or upon which the present record is not sufficiently clear to afford to the Commission the basis of exact decision. The effect of this will be to pass on to the consumers of the respondent immediate substantial savings, without at the same time placing an undue burden upon the operations of the respondent utility.

The book value of property invested in plant and equipment carried by the company in its electric fixed capital account was, as of April 30, 1937, $177,514,970. This amount is composed of the following items: $119,624,801 represents cost of respondent's own construction less retirements credited thereto on its books as of April 30, 1937; $21,183,478 represents acquired property of going concerns stated at the appraised value at date of acquisition less subsequent sales, identified retirements and amounts classified as other investments; $13,382,405 represents excess of price paid by respondent for the acquired property over the appraised value at date of acquisition; $19,745,648 represents an addition to the book value of the property arising from a revaluation as of January 1, 1927; $3,578,638 represents the book value of that portion of the Harwick Coal Mining investment which has been included by the respondent in its electric fixed capital.

In the tentative calculation which we are here making for the purpose of effecting a reasonable and proper temporary rate, we will make no deduction for the items arising from the excess of the purchase price over the appraised value of acquired properties or the excess arising from the revaluation, but the Commission's acceptance of these figures at this time in no way will bind it in the final determination of this rate proceeding.

Duquesne Light Company owns a coal mine known as Harwick mine. It created a subsidiary company, Harwick Coal & Coke Company (hereinafter referred to as Harwick Company), a company which operates this mine. All of the capital stock of this subsidiary is owned by respondent. Respondent has, in the past, in addition to taking the entire production of the Harwick mine, purchased large quantities of coal from the Warwick

Coal Company. The stock of this latter company was owned by the Harwick Company and in December of 1936, the Warwick Company was merged with the Harwick Company. The respondent now purchases all of the coal produced by the consolidated Harwick Company (with the exception of a nominal amount sold to the miners at the sites of actual operation), at a fixed price per ton. The surplus of the Harwick Company resulting from the mining operations is returnable to the respondent in the form of dividends. The income from this source as estimated for the year 1937 was $124,350. We recognize a difficult problem that must await future decision in regard to these coal properties. It must be left for the final determination of this rate case whether these coal properties shall be considered used and useful in rendering electric service and their value included in the rate base of the respondent or whether we shall exclude their coal properties from the rate base and determine whether or not the price paid to this affiliate is a reasonable price. Because of the need of further development of this subject in the record and for the purposes of this calculation we will include in the rate base the book value of the coal mine property, and include in operating expenses the price paid for coal, less the element of return on the mine property. In so doing, however, we do not bind ourselves to any specific method of treatment in the ultimate decision of this case.

For the purposes of this tentative calculation we shall allow cost of financing on the estimate of 4 per cent of the book value of the assets, or $7,158,802. The record in Security Docket 116, incorporated in this proceeding, shows the brokerage cost of the respondent's recent bond issue of $70,000,000 to be less than 3 per cent. Therefore we believe this over-all allowance of 4 per cent to be certainly a reasonable allowance. This item will likewise be subject to adjustment after a more complete record discloses the exact cost of financing.

[3] There has been introduced into the record Exhibit No. 10, prepared by the controller of the respondent company showing an estimate of working capital to be $3,725,000. At the final hearing on July 22nd, the controller testified that this tentative item in Exhibit No. 10 was computed by him and substantially followed a formula that he understood had the approval of the Commission. However, the record discloses certain discrepancies in the estimate and the Commission is not in accord with the figures contained therein. The controller further testified at the hearing on July 22nd, that in his opinion the estimate was not sufficient, but that it should also include additional allowances for bank balances which the respondent was bound, at least morally, to keep with certain of its collection agencies and that there should also be allowed an estimate for delayed collection of municipal obligations. The Commission will not allow any such items in addition to the figure contained in Exhibit No. 10, and for the purposes of this calculation shall accept the estimate contained in that exhibit. Again this in no way should be construed as our calculation of this item for the purposes of final determination.

In the final rate determination there may be added to fixed capital certain additional allowances for overheads. From our calculations we conclude, for the purposes of this temporary determination, that the sum of $12,000,000 is a liberal allowance for overheads and we shall allow that amount for these items of overheads. Included within the estimate is a provision for going concern value; whether or not such an allowance is to be allowed in the ultimate rate case depends entirely upon what the evidence shows.

To demonstrate tabularly what we have discussed in the foregoing paragraphs, we set forth the following schedule:

Schedule of Items Included in Property Value

Cost of company's own construction less retirements credited thereto on books of company as of April 30, 1937	$119,624,801
Acquired property stated at appraised value at date of acquisition, less subsequent sales, identified retirements and amounts classified as "Other Investments"	21,183,478
Excess of price paid for acquired properties over appraised value at date of acquisition	13,382,405
Excess of appraised value at January 1, 1927, over the then book value of said property less subsequent retirement related to said excess	19,745,648
Book value of coal property used exclusively in the process of generating electric energy, including property classified as other investments and property shown on the books of the coal company. The value stated includes the amount paid to the parent company (Philadelphia Company) in which transaction the parent company booked a profit of $2,295,000	5,033,730
Allowance for cost of financing, 4% of $178,970,062	7,158,802
Additional allowance for overheads in general	12,000,000
Working capital	3,725,000
Total	$201,853,864

[4] From this total book value of electric fixed capital, plus the additional allowances for overheads, there must be subtracted accrued depreciation and one additional item carried on the books of Duquesne Light Company. This latter account is titled: "Surplus Invested in Fixed Capital after January 1, 1919—$1,866,111." At page 54 of the record the controller testified that this item represented contributions in aid of construction. Such items have no place in the rate base and a reduction of that amount must be made from the fixed capital.

The record conclusively demonstrates that the annual charges made for depreciation subsequent to January 1, 1927, have maintained a reasonable alignment with the retirement costs and other charges to this account and for the purposes of this tentative calculation we feel that the accrued depreciation of $13,996,618 now appearing on the books of the respondent, including the amount set forth as related to the value arising from revaluation, is a reasonable allowance and therefore must be subtracted from fixed capital.

[5] Deducting the last two items discussed results in a tentative rate base of $185,021,135. We believe that in this determination a return of not more than 6 per cent is a reasonable allowance for an established electric utility serving a large, compact, urban community such as respondent supplies, and a return at this rate on the above calculated rate base would be $11,501,268. Having arrived at a reasonable return on the tentative value of the respondent's property, it now becomes necessary to examine the

revenues, expenses, and other operations.

The revenue of the respondent is derived principally from the sale of electric energy. The total revenue from this source for the year 1936 was $27,784,049; the revenue for the first six months of 1937 was $15,755,575; and the revenue for the first six months of 1936 was $13,385,130, or an increase of $2,370,443 over the similar period of the previous year. There has been introduced into this record the budget of the respondent prepared as of January 1, 1937, projected for the year 1937 and this budget estimates the revenue from this source to be $27,148,000. There has also been introduced into the record a revised budget prepared in June and the estimated revenue set forth in the revised budget is $30,439,000. It is significant to compare the estimates in the original budget with actual operation during the first six months of 1937, which we set forth in the following schedules:

Month	Estimated	Actual
January	$2,597,000	$2,761,000
February	2,382,000	2,552,000
March	2,436,000	2,672,000
April	2,402,000	2,626,000
May	2,254,000	2,431,000
June	2,263,000	2,511,123

The estimates were thus considerably below the actual income. From all of the above we feel justified in concluding that the income of the respondent from this source will be not less than $30,439,000, which is the figure contained in the respondent's revised budget of 1937, which we adopt for the purposes of this temporary rate.

The second source of revenue is derived from rentals of property included in the rate base. The actual rental received in 1936 was $612,796 and it has been testified to by an officer of the company that there is no substantial change for 1937; in our tentative calculation we will, therefore, accept this figure.

The operating expenses of Duquesne Light Company present problems in which there is a substantial dispute. We will treat certain of the items separately. There is an item of $2,747,000, for fuel expenses which we shall accept for the purposes of this tentative calculation after subtraction of an amount of $124,350 estimated as income from Harwick Company stock, leaving a total of $2,622,650. (See discussion on page 4.) This subtraction is necessary because the coal property is included in the rate base. Another item is annual depreciation, $2,480,000. In our foregoing discussion we stated that the annual depreciation maintained a consistent alignment with the actual retirement costs and for the purpose of this tentative calculation we shall not disturb this estimate. Taxes for 1937 are estimated to be $4,092,000. This expense is variable and many of the returns of 1936 have not been settled, but for the purposes of this tentative calculation, we shall not disturb this estimate. The respondent pays a rental charge for the lease of the property of the Monongahela Light & Power Company of $170,200, under a long-term lease agreement. In the proceeding we have definitely indicated our approach to this question in the ultimate decision of this case, but for the purposes of tentatively calculating the expenses of the company we shall not disallow at this time. The company pays pen-

sion expenses of approximately $470,000. The record is practically complete with the details of the pension plan. We shall allow the entire amount in this tentative calculation, without committing ourselves to any precedent with regard to this account. We feel that more study is necessary to formulate our policy with regard to allowing any part or all of such pension charges in operating expenses and so such decision shall be left for final determination.

There is an amount for other expenses of $8,014,000, which contains certain questionable items, including the respondent's estimated increased payroll costs for 1937. The record should be further developed with regard to these items, but for the purposes of this tentative calculation, we will accept the above figure.

[6] We repeat, there are a number of matters contained in the operating expenses which are in substantial dispute and our acceptance of the above-cited figures are in no way an agreement with them. However, in the calculation of a temporary rate it is the policy of the Commission not to predetermine matters of substantial dispute and with that in mind we set forth the following summary of the estimated revenues and expenses.

Summary

Operating revenue		$30,439,000
Rentals		612,796
Total revenue		$31,051,796
Fuel	$2,622,650	
Pension expense	470,000	
Taxes	4,092,000	
Depreciation	2,480,000	
Rent for lease of Monongahela Light & Power Co.	170,200	
Other expenses	8,014,000	
		17,848,850
Return earned		$13,202,946

Subtracting the foregoing total of the expenses, to wit, $17,848,850, from out estimated revenue of $31,051,796, we arrive at a figure of $13,202,946, which, for the purposes of discussion we shall round to $13,200,000. Comparing this total return with the calculated estimated return to which respondent is entitled, to wit, $11,501,268, or an excess of over $1,700,000, this excess is arrived at by a method of calculation that allows the fullest consideration of the claims of the respondent. However, we recognize the fact that it may be affected in the final case by considerations not herein weighted. Temporary rates should be imposed within the bounds of reasonable certainty, and from this record, giving full consideration to all possible matters, the consumers of this company are entitled to an immediate reduction of at least $1,250,000. This is $450,000 less than our estimate of allowable return, or 1½ per cent of the estimated revenues by respondent.

In the opening of this proceeding, and in the original inquiry and investigation, notice was given that the Commission would consider the imposition of temporary rates. Section 310 (a) provides as follows:

"The Commission may in any proceeding involving the rates of a public utility brought either upon its own motion or upon complaint after reasonable notice and hearing if it be of opinion that the public interest so requires, immediately fix, determine, and prescribe temporary rates to be charged by such public utility pending the final determination of such rate proceeding. Such temporary rates so fixed, determined, and prescribed shall

be sufficient to provide a return of not less than 5 per centum upon the original cost less accrued depreciation of the physical property (when first devoted to public use) of such public utility used and useful in the public service and if the duly verified reports of such public utility to the Commission do not show such original cost less accrued depreciation of such property the Commission may estimate such cost less depreciation and fix, determine, and prescribe rates as hereinbefore provided."

This section and § (e) of 310 are virtual restatements of the existing law of the state of New York. There are no court decisions upon the Pennsylvania statute, but the similar New York statute has been upheld by the highest court of New York state. Bronx Gas & E. Co. v. Maltbie (1936) 271 N. Y. 364, 14 P.U.R. (N.S.) 337, 3 N. E. (2d) 512. The present record conclusively shows that the original cost of the property installed by Duquesne Light Company is $119,624,891. The respondent is made up in part of property acquired as going concerns and to the above figure must be added the original cost of acquired properties. The present uniform systems of account specifically provides in "Instructions Electric Plant Account"—page 37 of Exhibit 30:

"B. The cost to the utility of its electric plant shall be ascertained by analysis of the utility's records. In ascertaining the cost it is not intended that any correction need be made for depreciation or amortization applicable to operating units or systems previously acquired, whether or not such depreciation or amortization was recorded in the books of the accounting utility. It is likewise not intended that adjustments shall be made to record in electric plant accounts amounts previously charged to operating expenses in accordance with the uniform system of accounts in effect at the time or in accordance with the discretion of management as exercised under such uniform system of accounts."

[7, 8] Values contained on the books of the predecessor companies, reflecting conditions and costs at the time of construction, are the best evidence of original cost of the property. Exhibit No. 14 shows, as explained by the testimony of the controller of the respondent company, that the books of the predecessor company show a value as at date of acquisition, not exceeding $22,500,535 for the major properties listed in that exhibit for which properties Duquesne Light Company paid $32,869,142. The total purchase price paid by respondent for all acquired properties as shown in Securities Docket 116 was $38,612,000 of which there is included in the present book value of fixed capital $21,183,748. This latter amount represents the appraised value of the property at date of acquisition less property classified as other than electric property and after deduction therefrom of subsequent sales, identified retirements and surplus charges to May 31, 1935. The predecessor company's book value of certain of these properties, as shown in Exhibit 14, was greater than respondent's appraised value to the extent of approximately $3,000,000. For the purpose of this calculation we shall allow the balance of appraised

value at date of acquisition $21,183,741, plus the additional $3,000,000 indicated by the values on the books of the predecessor companies. It appears that many of these properties were purchased by the respondent through a parent holding company, The Philadelphia Company, at prices far exceeding the book value as shown by the books of the purchased company, as revealed by similar transactions in the record, i. e., The Harwick Company transaction, Exhibit 14, and it is more likely that excess of purchase price over appraised value of acquired properties, $13,382,405, represents the profit taken by the holding company which controls the respondent and which manipulated the transactions by which the respondent acquired these going properties. It is one of our chief aims in this rate case to be certain to eliminate from the elements comprising the rate base . . . from the value of the property of the respondent on which the consumer pays a return in the form of charges for electric service . . . any reflection of the book profit so accruing to the holding company. We feel that this resulting total $24,183,471, is a reasonable estimate of the original cost of acquired going properties. We reiterate such opinion is subject to revision in the final determination of this case.

[9] In this calculation of the original cost, as shown by the record, there must be added to the foregoing total of fixed capital an allowance for working capital. For the purpose of this calculation, we will adopt the same figure we adopted in the previous discussion of the tentative rate base, to wit, $3,725,000, as contained in Exhibit 10. We do not consider as part of "physical property used and useful" overheads which are not reflected in the actual cost of construction shown on the companies' books, and therefore, for the purpose of this calculation, no further allowance for overheads should be made. From this sum there must be deducted accrued depreciation, excluding that portion related to the revaluation, and for this purpose we shall adopt the book figure of reserve for depreciation of $8,268,862. There must also be deducted the item described hereinbefore as contribution in aid of construction in the sum of $1,866,111. The following table shows the resultant estimate of original cost:

Cost of company's own construction less retirements credited thereto on the books of the company		$119,624,801
Acquired property stated at the balance remaining of the appraised value at date of acquisition		24,183,478
Book value of coal property less profit to Philadelphia Company included therein		2,738,730
Working capital		3,725,000
Total		$150,272,009
Less		
Contributions in aid of construction	$1,866,111	
Reserve for depreciation	8,268,682	
		10,134,793
		$140,137,216

Under the terms of the statute, a 5 per cent return on this figure would be $7,003,860. This is so far below the amount of the return permitted by this order that any slight error made in our estimate of original cost could not be so substantial as to make this order in violation of the statute. We feel that the record fully complies with the requirements of § 310 (a) and

that a reduction of $1,250,000 is a reasonable reduction and within our statutory powers to order.

[10–12] Before coming to the formal order in this matter, one other comment should be made. Prior utility regulation in Pennsylvania and other jurisdictions has been content to prescribe the allowable return to which a utility is entitled. This Commission feels that one other step is equally essential, namely, that of indicating the character of the tariff under which the utility should operate. There is ample power in the statute to permit us to prescribe such tariffs and a very recent opinion of the superior court in the case of Pennsylvania Power & Light Co. v. Public Service Commission (1937) — Pa. Super. Ct. —, 19 P.U.R.(N.S.) 433, 193 Atl. 427, suggested that the Commission exercise this prerogative. The present tariffs of the respondent company contain a great many schedules (see discussion on page 1) and are set forth in such fashion as to be, if not incomprehensible to the ordinary consumer, at least so complicated as to discourage study. We express the opinion that there is a great need for simplified tariffs containing a minimum number of schedules. In this case the respondent company will be directed to simplify its tariff.

We shall set forth the principles upon which the new tariff should be based, relating our discussion necessarily to the present tariff of respondent. No change need be made at this time in the following schedules: "J" —the tariff under which service is rendered to street railways; "M"—the tariff under which emergency municipal service is rendered, and "N"—the special tariff applicable to service at 66,000 volts.

Under schedule "E" there are presently served three customers comprising more than 600 schools and other municipal connections, all of which are in the city of Pittsburgh. All other public and parochial schools and municipal connections in respondent's territory have been served under schedule "W" at rates, which when applied to all but the very largest schools, are higher than schedule "E." We feel that all such schools and municipal connections other than street lighting should have available a maximum rate of 2½ cents per kilowatt hour provided for in schedule "E." However, if any such school can more advantageously take service under the provisions of the present rate "W" this latter rate, or the schedule into which it will be transposed, should be made available to it.

[13–15] Rate "T" is the present schedule under which municipal street lighting is served. Principal criticism of this schedule lies in the fact that its present quantity discount ranging from naught to a maximum of 15 per cent is far too great a range and should be amended to provide a minimum discount of 3 per cent and a maximum of 5 per cent. The rates in this schedule do not appear to give proper consideration to the costs of different types of street lighting equipment, and in connection with the correction of the quantity discount, the rates should be revised to correct such differences and to show separately the portion of the rate applicable to the special equipment required. Application of this schedule should be

restricted to tax collecting political subdivisions.

Churches and charitable institutions are at present served under Rate "W" subject to the provisions of Rider No. 7, which limits the maximum average cost of 4½ cents per kilowatt hour. The Commission is of the opinion that said Rider No. 7 should be continued with the maximum average cost to churches and charitable institutions limited to 4 cents per kilowatt hour.

The schedules we have discussed, viz., "J," "M," "N," "E," "T," and Rider 7 of Rate "W," apply to service of a special character, the rates in which cannot be grouped or in any way consolidated with rates applicable to respondent's standard service. With the revision of schedules "E" and "T" as above indicated, we consider the five tariffs for special service to satisfy present needs.

[16] All of the remaining schedules, viz., "A," "C," "DW," "H," "K," "VW," "F," "FW," and "G," provide rates for the company's standard electric service applicable to customers having peak power demands ranging from that of a single 50-watt lamp to an installation of approximately 24,000 horsepower. The company has classified these customers into residential, small commercial, large commercial, and wholesale light and power. For each of the above customer classifications there are two or more schedules of rates. A careful study and analysis of the rates contained in these schedules reveals that identical service is rendered at different rates under different schedules to customers. Preferences thus existing under the present rate classifications must be eliminated. We are of the opinion that a mere readjustment of existing rate schedules cannot accomplish this end and that a rearrangement of the customer groups and the rate schedules must be made.

[17] In the matter of establishing rates for the company's standard service, the Commission is of the opinion that it would be desirable to have not more than two customer groups with one schedule of rates for each group; but we find that it is not practical to change in one step from the existing complicated structure involving many groups with several schedules of rates within each group, to a rate structure containing only two schedules. Furthermore, it is the Commission's opinion that the ultimate rate structure should not contain provision for demand charges on the basis of a connected load count of the customer's equipment, which, when taken for billing purposes at 100 per cent, denies to the customer any advantage to which he may be entitled by reason of the diversity in use of such equipment.

The rates paid by the connected load group of customers (including residential customers with a high room count, and commercial customers on Rates "V" and "W" having connected loads from 0 to 18,000,000 volt amperes) are materially out of line with the block meter rate applied to residential customers. In imposing temporary rates, however, the amount of money available for reduction of rates is not sufficient to enable the Commission to completely eliminate, at this time, rates based upon a count of connected load. Therefore,

the classification of customers prescribed and the rates indicated herein have been designed to accomplish certain important steps toward the ultimate establishment of two rate schedules applicable to all customers taking respondent's standard service. By standard service we mean that service rendered to all customers other than to tax-collecting bodies, charitable institutions, and certain special services as hereinbefore set forth. These steps are enumerated as follows:

1. Simplify the block meter rate by transferring to the connected load group the large residences (more than 15 rooms) the average connected load of which is too great to permit of an equitable application of the present block meter rate provided for small customers.

2. Reduce the number of customers to be billed on the basis of a count of connected load by:

(a) Transferring to the block meter rate those commercial customers having an insignificant load (1,000 volt amperes or less).

(b) Transferring to a metered demand rate those commercial customers with demands in excess of 5,000 volt amperes, or consumptions in excess of 750 kilowatt hours, which is obviously too great a demand to permit of grouping with the very small customers.

3. Establish for customers having connected loads of 1,000 to 5,000 volt amperes, rates which are directly in line with the block meter rate prescribed for small customers and the metered demand rates applicable to the large customers. This alignment of rates will facilitate the subsequent transfer of the connected load customers to either of the two principal rate schedules.

To accomplish this program, the respondent's customers taking its standard service, of which there were 327,642 at June 30, 1937, will be classified as follows:

Group 1. Residential customers having homes of 15 rooms or less, and commercial customers having a connected load of 1,000 volt amperes or less.

Group 2. All customers having a connected load of more than 1,000 volt amperes and not more than 5,000 volt amperes. This shall include residential customers having homes of more than 15 rooms.

Group 3. Customers having a connected load of more than 5,000 volt amperes or a consumption greater than 750 kilowatt hours per month. The billing demand of these customers shall be determined by actual measurement through a demand meter.

The rates to be charged small customers in the first group shall be:

(Minimum charge, 50¢ per service per month.)
First 50 kw. hr. per meter per month @ 5¢ net per kw. hr.
Next 100 kw. hr. per meter per month @ 3¢ net per kw. hr.
Excess @ 2¢ net per kw. hr.

The rates to be charged customers in Group 2 shall be identical for each thousand volt amperes of connected load with the rates charged the customers in Group 1.

Customers in Group 3 shall be charged in accordance with the rates now contained in respondent's schedule "W"—"Large Commercial Service" with such amendments in the de-

mand and energy charges as may be necessary to produce the proper relationship with the rates applicable to customers in Group 2, thus avoiding increased bills upon the subsequent transfer from the latter group of those customers whose monthly consumption exceeds 750 kilowatt hours.

[18] The reclassification of customers and the application of the rates indicated herein will provide for the three groups established, rates which are as low or lower than the existing rates, except when applied to certain customers on schedules "F," "FW," and "G." The customers served under these schedules, all of whom are industrial concerns having individual connected loads of more than 20,000 volt amperes and belonging in the metered demand group, appear to have preferential rates. The Commission understands that in most instances these customers could have been served under the old rate "W" without receiving an increased bill, if they had installed the proper equipment. It would therefore appear that the increased cost which they would bear under the standard schedule, represents a penalty for operating at a poor power factor. Whether or not these customers can protect themselves from increases over their present preferential rates for electric power, the Commission does not feel justified in permitting such rates to continue indefinitely. However, it may be that these customers if given a reasonable notice of the elimination of the preferential rates, may be able to provide proper equipment and thus avoid the penalty. Therefore the Commission, recognizing that a hardship may be inflicted upon such customers which may in turn affect the employees thereof, will direct the respondent to give the customers on these three schedules a maximum of nine months' notice of the transfer to the standard rate.

After full consideration of the matters and things involved; therefore,

Now, to wit, August 17, 1937, it is *ordered:* That temporary rates be and the same are hereby imposed under § 310 of the Public Utility Law and that the Duquesne Light Company, respondent, forthwith file with the Commission a new tariff which shall effect a reduction in its gross operating revenues of not less than $1,250,000 per annum.

It is *further ordered:* That the tariff herein directed to be filed shall comply with the directions set forth in this report and order. This tariff shall contain not more than eight open (available to present and future customers) schedules of rates, and three closed (available only to present customers now served thereon) schedules of rates "F," "FW," and "G," which closed schedules of rates shall be withdrawn from the tariff within nine months from this date.

It is *further ordered:* That the effect of the temporary rates hereby imposed shall be considered by the Commission in the final determination of the rates as provided for in § 310 (e) of the Public Utility Law.

OHIO PUBLIC UTILITIES COMMISSION

Re Independent Telephone Companies of Ohio

[No. 10248.]

Service, § 442 — Telephones — Monophone instruments.

1. Telephone companies should meet the increasing demand for monophone subscriber station equipment, subject to a limitation that the companies should not be required to install monophone equipment within a calendar year in excess of 20 per cent of existing desk equipment subscribers, so as not to be confronted with an excessive instant demand for conversion of stations, p. 15.

Rates, § 558 — Telephones — Monophones.

2. A reasonable rate differential for monophone telephone equipment should not exceed the sum of 25 cents per month for a period of two years, provided that where subscribers now using such equipment have paid the sum of $6 or more, the excess charge shall cease and that subscribers now using such equipment who have paid less than $6 in such charges shall continue to pay the same only until such sum has been paid, the right to the use of monophone equipment without payment of the surcharge being limited to continuous use in the exchange in which such payments have been made, p. 15.

[August 16, 1937.]

INVESTIGATION *of monophone telephone instruments and rates for monophone telephone service; independent telephone companies required to show cause why they should not be required to file schedules governing the furnishing of monophone equipment service.*

By the COMMISSION: **[1, 2]** The Commission having under consideration the matter of a reasonable rate or charge to be maintained, imposed, charged, and collected by the so-called Class A and Class B independent telephone companies operating in the state of Ohio for the use, by subscribers, of the so-called monophone type of instrument, and having caused investigations to be made by its engineers and accountants, and having at conferences discussed said matter at length with the managers of many, if not practically all, of such independent telephone companies, and being in receipt of relevant data pertaining thereto submitted by such telephone companies, finds:

That the independent telephone companies operating within the state of Ohio have not adopted monophone equipment as standard;

That such development by such companies is negligible;

That there is an increasing demand

upon the part of the public for such service;

That the existing desk and wall type subscriber station equipment largely has been in service for an extended period and that development in the telephonic art at this time indicates an increasing usage of monophone subscriber station equipment;

That the companies have by their present system of charges deterred a general usage of monophone equipment by the imposition of charges in excess of prevailing charge for desk equipment, and that the average annual operating and maintenance expense for the maintenance and operation of service to subscribers with such monophone equipment is not sufficiently great to justify the present continuous surcharge for such equipment;

That such independent telephone companies should not be confronted with an excessive instant demand for conversion of stations by subscribers, and, therefore, any new schedule to govern such service which the Commission may at this time establish might be accompanied with a provision that no such company shall be required to install monophone equipment within a calendar year in excess of 20 per cent of its existing desk equipment subscribers; and

That a reasonable charge to be maintained, imposed, charged, and collected by the independent telephone companies operating within the state of Ohio for the use of monophone subscribers' station equipment in excess of the prevailing charges of independent companies of such classes for desk subscriber common battery station equipment where differential charge for desk equipment prevails is not to exceed the sum of 25 cents per month for a period of two years, provided, however, that where subscribers now using such equipment have paid the sum of $6 or more, the excess charge shall cease, and that subscribers now using such equipment who have paid less than $6 in such charges, shall continue to pay the same only until such sum has been paid, whereafter the prevailing rental for desk set stations shall be the regular charge for monophone equipment;

Provided, however, that the right to the use of monophone equipment without payment of the surcharge aforesaid be limited to continuous use in the exchange in which such payments have been made.

NOTE. In pursuance of the order of citation promulgated August 16, 1937, and the representations and showing by certain of the Class A and B independent telephone companies operating in the state of Ohio, the matter came on for final consideration and the Commission ordered Class A and B telephone companies maintaining for the use of desk-set subscriber stations a differential above the charge for wall type instruments to conform their schedules and charges to the Commission's findings.

The Commission's findings were in substantially the same form as in the earlier order, but the final paragraph was changed to provide that "the right to the use of the monophone or cradle type station equipment without payment of the surcharge aforesaid be limited to continuous use in the system of the independent company to which such payments have been made, conditioned,

however, that continuous service shall mean service where any interruption in service from any cause shall not exceed a period of twelve months." Re Independent Telephone Companies of Ohio (Ohio) No. 10248, Sept. 14, 1937.

TENNESSEE RAILROAD AND PUBLIC UTILITIES COMMISSION

Re The Tennessee Electric Power Company

[Docket Nos. 2060, 2062.]

Depreciation, § 13 — Annual cost — Straight-line method — Changing base — Earnings of reserve.

1. An estimate of annual depreciation expense of a proposed generating plant is erroneous when, following the straight-line method, it is based upon a percentage of the original investment without depreciation or reduction of the investment throughout the life of the plant and without taking into account accumulations on the reserve created, p. 25.

Security issues, § 17 — Jurisdiction of Commission.

2. The Commission has jurisdiction over the issuance of any securities by public utilities operating in the state, p. 34.

Security issues, § 18 — Commission approval — Duty of Commission.

3. The Commission, before approving security issues, must be satisfied that the sale and delivery is to be made in accordance with law and that the purpose of such issue is approved by the Commission, p. 34.

Security issues, § 44 — Approval by Commission — Factors considered.

4. The Commission in approving security issues must satisfy itself that the proposed issuance is necessary and for a proper purpose, looking not only to the interest of the holders or purchasers of securities of the company, but determining whether such investment will result in benefits to the ratepayers and the general public and meet the needs of the company's customers, p. 34.

Security issues, § 58 — Purpose — Electric plant construction.

5. The purpose of the issue of securities is proper when the proceeds are to be used in connection with the building of an electric generating plant to furnish the necessary amount of power for the immediate needs of an electric utility company, where production by the proposed plant is the cheapest source of power available, p. 34.

Security issues, § 52 — Factors affecting approval — Electric plant construction — Availability of purchased power.

6. A public utility company should be authorized to issue securities for the financing of construction of an electric generating plant to meet its power requirements although there is available an enormous amount of power generated by a governmental agency, where the company can generate power more cheaply than it can purchase it under any rate proposed for its power needs, p. 34.

Security issues, § 49 — Factors affecting approval — Impairment of value by governmental operation.

7. Authority to issue securities to finance the construction of an electric power plant in a territory where a governmental agency is developing power sources should not be denied on the ground that the company's business will be destroyed, since the Commission cannot assume that money invested in actual property used in rendering service to the public economically would not add some value to the property, nor can the Commission assume that any agency of the government of the United States will make valueless prudent and necessary investments in property serving the public, p. 36.

Construction and equipment, § 1 — Commission approval — Service.

8. Expenditures for a proper purpose when economically justified should be approved, and the Commission should require utilities over which it has jurisdiction to make extensions to their property whenever in the judgment of the Commission such extensions are needed by the public and are justified economically, p. 37.

Construction and equipment, § 2 — Managerial discretion — Commission interference.

9. The Commission should not substitute its judgment for the judgment of the officials and directors of an electric company when they have determined that additional power facilities should be installed immediately unless it is clearly shown that the public would not be benefited and the users of the company's service would be affected adversely, p. 38.

Electricity, § 3 — Power production or purchase — Comparative costs.

Discussion by the Tennessee Commission of the comparative costs of building and operating a generating plant for power production and the alternative of purchasing power from an agency of the Federal government, p. 23.

Rates, § 367 — Electricity — Wholesale power purchases — Federal agency.

Proposed contract for furnishing to an electric utility company power produced by the Tennessee Valley Authority, p. 32.

Electricity, § 5 — Hydroelectric power and steam power — Costs and rates.

Statement that hydroelectric power should be sold at a cost less than the cost of producing the same by steam so that the savings could go back to the public in the form of lower rates, p. 39.

(JOUROLMON, Commissioner, dissents.)

[August 14, 1937.]

INVESTIGATION *of adequacy of power supply of an electric utility company and petition by the company for authority to issue first and refunding mortgage bonds for capital expenditures; security issues authorized and company ordered to begin construction of power plant.*

By the COMMISSION:

History of the Case

On April 14, 1937, the Commission issued an order citing The Tennessee Electric Power Company to appear before it and show cause why imme-

diate arrangements should not be made to insure safe, adequate, and proper service in the Nashville area. This order was issued in Docket No. 2060, and the matter was set for hearing before the Commission at its offices in Nashville, Tennessee, for Tuesday, April 27, 1937.

Previous to the issuance of this order the Commission was informed that there was need for additional power facilities in the Nashville area in order to insure that the public would be supplied with all of the power that it might require from The Tennessee Electric Power Company, and on April 1, 1937, representatives of The Tennessee Electric Power Company came to the offices of the Commission to discuss an application to be filed by The Tennessee Electric Power Company, asking for approval of the issuance of certain securities.

In this connection the representatives of the company advised the Commission that the power facilities of the company in the Nashville area would probably be inadequate to meet the increasing demand of the public and should any emergency arise, resulting in the loss of part of the present power supply, there would be a probability that the entire power requirements could not be furnished, and the company desired approval of its plan to construct a new 25,000 kilowatt capacity steam plant, proposed to be erected near Nashville, at Bordeaux, Tennessee.

No petition was filed by the company at the time of the conference, but the Commission advised the representatives of the company that before it could in any way pass upon any application for approval of issuance of securities for the purpose of erecting a steam power plant, it would be necessary for the company to show the necessity for the erection of such plant, and to justify the building of such plant, since there is available in Tennessee an abundance of power generated by the Tennessee Valley Authority, an agency owned and controlled by the government of the United States. The representatives of the company impressed upon the Commission the necessity for beginning the work as soon as possible. The Commission expressed the thought at that time that public power should be purchased as it no doubt would be sold by the Tennessee Valley Authority cheaper than it could be generated by The Tennessee Electric Power Company but that the Commission would consider any petition the company might file and render the earliest decision possible.

On April 2nd, in order that the Commission might be in a position to expedite any hearing as to the arrangements proposed to be made by The Tennessee Electric Power Company to provide adequate service for the Nashville area, the Commission through its chief engineer addressed the following telegram to the Tennessee Valley Authority:

"April 2, 1937

"Tennessee Valley Authority
Knoxville, Tennessee

Attention Mr. David E. Lilienthal

"The Commission has before it petition of The Tennessee Electric Power Company asking for authority to construct a twenty-five thousand

kilowatt steam generating plant in Nashville, Tennessee (stop) Before passing upon this matter the Commission deems it necessary to determine not only the necessity for construction of a plant but also find if power may be obtained from the Tennessee Valley Authority at a cost comparable with the cost of steam plant operation so that the best interest of the general public is served (stop) The Commission therefore desires answers to the following questions: Does the Tennessee Valley Authority have twenty-five thousand kilowatts to furnish power demand for Nashville area (stop) Will the Tennessee Valley Authority sell this power to The Tennessee Electric Power Company (stop) If so advise as to rates and conditions under which power would be sold.

"Railroad and Public Utilities Commission

"By Malcolm R. Williams,
Chief Engineer."

The Commission was advised in reply to this telegram that the Tennessee Valley Authority had available power to furnish the Nashville area and that the Tennessee Valley Authority would sell this power to The Tennessee Electric Power Company, and that the Commission would be furnished with a rate applicable for sale of power by the Tennessee Valley Authority to The Tennessee Electric Power Company. This rate was furnished and is the rate referred to by various witnesses in this hearing.

On April 5, 1937, the Commission through its chief engineer addressed the following letter to the president of The Tennessee Electric Power Company:

"Mr. Jo Conn Guild, Jr., President
The Tennessee Electric Power Company
Chattanooga, Tennessee
"Dear Sir:

"At conference with members of the Tennessee Railroad and Public Utilities Commission on last Thursday and Friday, your representatives stated that you would probably desire to file at once an application for the approval of an expenditure for a steam plant at Nashville and expressed a desire to have the Commission make the most expeditious investigation possible to the end that the construction, if approved, might proceed at once.

"In compliance with your request the Commission has undertaken to ascertain and compare cost of the production of current by your contemplated steam plant and the cost at which current might be purchased from Tennessee Valley Authority. The Authority has kindly furnished us with the prices at which it is willing to contract with you to furnish current, and we will be pleased to make comparison as soon as we can arrive at a conclusion as to what the cost of production would be at the contemplated steam plant.

"If you will furnish us at once what data you can supply showing your contemplated costs we shall lose no time in investigating the two possibilities and in making a comparison of the apparent economy of the two plans, so that we may be ready to act with a minimum of delay on the filing of your application.

"Yours very truly,
"Malcolm R. Williams,
Chief Engineer."

On April 8, 1937, The Tennessee Electric Power Company replied to the chief engineer's letter of April 5, 1937, and advised that the company had been in long negotiations with the Tennessee Valley Authority about the purchase of power to meet its requirements, and that The Tennessee Electric Power Company had been and was willing, not only to buy future requirements of energy for Nashville, but to suspend the operation of various steam plants and purchase a very large quantity of power from the Tennessee Valley Authority.

The company further stated in this letter that it did not desire to purchase power from the Tennessee Valley Authority without an agreement from the Tennessee Valley Authority to the effect that it would not attempt to invade or supply territory now being served by The Tennessee Electric Power Company.

It was again stated in this letter that the company desired to commence the building of a steam plant at once, since the service in Nashville might be put to great hazard. The company, however, did not furnish the Commission with information requested as to the cost of producing electrical energy at its proposed steam plant.

Since the Commission was informed that there was necessity for immediate arrangements to be made to insure that the Nashville area of The Tennessee Electric Power Company be furnished with adequate and satisfactory power supply and, since it did not appear to the Commission that any progress was being made to that end, it was necessary that the Commission issue an order in Docket No. 2060, citing The Tennessee Electric Power Company to show cause why immediate arrangements should not be made for insuring power supply for the Nashville area, and, as set out above, this order was issued on April 14, 1937.

After the issuance of this order The Tennessee Electric Power Company, under date of April 24, 1937, replied to the Commission by letter, stating that it had unsuccessfully undertaken negotiations with the Tennessee Valley Authority for supplementing its power facilities at Nashville, and that because such negotiations had been unsuccessful was now filing an application with the Commission, which application was filed April 26, 1937, asking for authority to issue $1,500,000 principal amount of its first and refunding mortgage bonds, 5 per cent series, due June 1, 1956, for the purpose of reimbursing the treasury for unfunded capital expenditures made and to be made in the construction of a steam plant at Bordeaux, Tennessee, on the Cumberland river near Nashville, to generate 25,000 kilowatts, and that capital expenditures for this purpose were required in order to furnish safe, adequate and proper service.

On April 21, 1937, under Docket No. 2060, the Commission entered an order changing the date for hearing and setting it for Tuesday, May 4, 1937, at 10 o'clock A.M. Therefore, this matter came on for hearing before the Commission at its offices in Nashville, Tennessee, on Tuesday, May 4, 1937.

Hearing of the Case

In connection with the hearing of the case petitions were filed by inter-

ested parties, asking permission to intervene in the hearing and to be heard by counsel upon brief and argument. Those petitioning to intervene were permitted by the Commission to take part in the hearing through counsel.

The following appearances were made: Southern Appalachian Coal Producers Association; Durham Land Company; Tennessee Coal Operators; The National Coal Association, represented by H. J. Weeks; West Kentucky Coal Bureau, represented by Frank D. Cain; United Mine Workers of America, represented by Tom Jones in the absence of President William Turnblazer, of District No. 19 of the United Mine Workers of America.

Petitions were also filed with the Commission by the Citizens Protective League of Nashville, numerous citizens of Bordeaux, Tennessee, and the Nashville Tennessee Valley Authority Power League. The petitions were allowed to be filed and are a part of the record in this case.

Thus, the case now before the Commission is upon the application of The Tennessee Electric Power Company, filed April 26, 1937, asking for authority to issue $1,500,000 of its first and refunding mortgage bonds, 5 per cent series, due June 1, 1956, under the terms of the mortgage securing the same, and to sell the said bonds at the best price obtainable but not less than 90 and accrued interest and applying the proceeds therefrom to the extent thereof toward the reimbursement of its said capital expenditures made and necessary to be made to construct at Bordeaux, Tennessee, on the Cumberland river near Nashville, a steam plant designed to generate 25,000 kilowatts, which plant is to cost approximately $2,000,000.

In connection with the hearing of this case numerous witnesses were presented by the company, who testified to the effect that the cost of producing power at the proposed steam plant to be located at Bordeaux, Tennessee, would be less than the cost of purchasing the same amount of power and energy from the Tennessee Valley Authority at the proposed rate.

The principal witnesses for The Tennessee Electric Power Company in this connection were Messrs. J. A. Longley, operating vice president; O. J. Miller, production and transmission engineer; and Professor Edward L. Moreland, consulting engineer and head of the electrical engineering department of the Massachusetts Institute of Technology.

Professor F. L. Wilkinson, Jr., consulting engineer, also engaged at this time in teaching engineering at the University of Tennessee, was employed by the Commission to make a report in connection with facts presented at the hearing, which report was submitted and introduced into the record in this case.

The report of Professor F. L. Wilkinson, Jr., showed that, on the basis of power demand and energy consumption requirements as set forth by The Tennessee Electric Power Company, it would be cheaper to generate energy at the proposed steam plant than to purchase the same amount of power and energy from the Tennessee Valley Authority on the quoted rate.

Mr. E. J. Muir, Tennessee Valley Authority engineer of the department of rates and research, was presented

and testified as a witness at the hearing. Mr. Muir testified to the effect that, based upon the amount of power and energy required as stated by representatives of the company, the power could be produced cheaper at the proposed Bordeaux steam plant than by purchase from the Tennessee Valley Authority. However, Mr. Muir did present evidence tending to show that if the number of kilowatt hours required were purchased by The Tennessee Electric Power Company on an 85 per cent load factor basis, the energy could be purchased cheaper from the Tennessee Valley Authority than it could be produced at the proposed steam plant.

In connection with Mr. Muir's testimony and exhibits it is necessary that correction, adjustment, and revision be made, since Mr. Muir did not give the average cost following the setting up of depreciation on a straight-line basis and his original exhibit is therefore in error.

Analysis of Evidence

In making an analysis of the evidence presented the Commission is of the opinion that the testimony of the various witnesses should so be revised that comparison may be readily made in order that the real differences in testimony may be clearly determined.

We are therefore setting out below in tabular form comparative statements of witnesses based on testimony and on the station use, line loss, load factor, and net kilowatt hours use as estimated by each witness:

	Longley Miller	Moreland
1. Investment steam plant	$2,000,000.00	$2,000,000.00
2. Fixed charges:		
3. Interest	6.17%	6.17%
4. Taxes	1.50	1.50
5. Depreciation	2.50	2.25
6. Total fixed charges	10.17%	9.92%
7. Fixed charges on investment	$203,400.00	$198,400.00
8. Labor, maintenance, and supplies	94,600.00	103,000.00
9. Fuel costs	140,000.00	140,000.00
10. Total operating costs	$234,600.00	$243,000.00
11. Total annual costs	$438,000.00	$441,400.00
Additional costs:		
Investment in substations and lines of steam plant	$.....	$202,600.00
Fixed charges on investment in S. & L.	.....	20,154.00
Operation and maintenance costs S. & L.	.....	1,122.00
Total costs for substation and line	$.....	$21,276.00
Total annual costs—Steam station line 11	438,000.00	441,400.00
Total all costs—to 110-kv. ring	Not Given	$462,676.00
Total costs energy purchased Columbia-TVA	475,817.44	449,361.00 [3]
Fixed charges transmission by T.E.P. Columbia-Nashville	98,310.50	76,038.00
Operation and maintenance T.E.P.-C.N.	0.00 [2]	7,415.00
Total costs of energy delivered Nashville	574,127.94	532,814.00 [4]
Total steam station cost	438,000.00	462,676.00

	Longley Miller	Moreland
Additional costs:		
Total purchased Columbia-T.E.P. delivered Nashville	$574,127.94 [7]	$532,814.00
Difference	$126,127.94	$70,138.00 [9]
	(127,000.00)	
Total steam station cost	.....	.....
Total purchased TVA Nashville	.....	.....
Difference	$.....	$.....
	Wilkinson	Muir
1. Investment steam plant	$2,000,000.00	$2,000,000.00
2. Fixed charges:		
3. Interest	6.17%	6.17%
4. Taxes	1.50	1.50
5. Depreciation	2.50	4.50
6. Total fixed charges	10.17%	12.17%
7. Fixed charges on investment	$203,400.00	$243,400.00
8. Labor, maintenance, and supplies	94,600.00	94,600.00
9. Fuel costs	134,500.00	134,500.00
10. Total operating costs	$229,100.00	$229,100.00
11. Total annual costs	$432,500.00	$472,500.00
Additional costs:		
Investment in substation and lines of steam plant	$.....	$.....
Fixed charges on investment in S. & L.	.....	.....
Operation and maintenance costs S. & L.	.....	.....
Total costs for substation and line	$.....	$.....
Total annual costs—steam station line 11	432,500.00	472,500.00
Total all costs—to 110-kv. ring	Not Given	Not Given
Total costs energy purchased Columbia-TVA	465,722.00 [3]	379,835.64 [1]
Fixed charges transmission T.E.P. Columbia-Nashville	86,615.00	54,156.50 [10]
Operation and maintenance T.E.P.-C.N.	0.00 [2]	0.00 [2]
Total costs of energy delivered Nashville	$552,337.00 [5]	$433,992.14 [6]
Total steam station cost	432,500.00	472,500.00
Total purchased Columbia-T.E.P. delivered Nashville	552,337.00 [3 11 4]	433,992.14
Difference	$119,837.00 [9]	$38,507.86 [8]
Total steam station cost	432,500.00	472,500.00
Total purchased TVA Nashville	534,956.00 [3 11 4]	415,757.90
Difference	$102,456.00 [9]	$56,742.10 [8]

[1] Demand is determined by delivering kw. hr. required at 85% L.F.
[2] No costs allowed for maintenance and operation—on transmission lines only and substation.
[3] Omitting penalty for L.F.
[4] Including interest on $250,000.00 loss due to plant abandonment. Fixed charges on transmission line.
[5] Omitting penalty for L.F. and including interest on $250,000.00 loss due to plant abandonment and including fixed charges on transmission line.
[6] Corrected for transmission line loss.
[7] Arrived at by using 3.92 mills purchase price Columbia on 121,382,000 kw. hr. plus interest on $250,000.00 loss and fixed charges on $815,000.00 transmission line.
[8] Savings by purchase.
[9] Savings of steam generation over purchase.
[10] Transmission line only—no substation included.
[11] Gross kilowatt hours purchased.

In the above Messrs. Longley and Miller compared the production cost at the steam plant in Nashville with the cost of purchasing power from the

Tennessee Valley Authority at Columbia, Tennessee, and transmitting energy purchased at Columbia over the transmission lines of The Tennessee Electric Power Company from Columbia, Tennessee, to Nashville, Tennessee.

In this comparison both witnesses Longley and Miller assumed the loss of energy due to transmission would be approximately the same as the amount of energy used in the operation of the steam plant and therefore these witnesses compared the gross amount of power and energy to be generated and purchased. However, in their testimony they state that approximately 5 per cent would be the transmission line losses and station use.

Mr. Moreland estimated the use of energy at the steam plant, including loss in delivering energy to the 110-kilovolt ring at 6.74 per cent, and he also estimated that the transmission line losses from Columbia to Nashville transmitted to the 110-kilovolt ring would be 4.07 per cent.

Mr. F. L. Wilkinson, Jr., consulting expert for the Commission, compared the gross energy produced at the steam plant with the gross energy purchased at Columbia on the assumption that the loss of energy, due to transmission, would be approximately the same as energy used in the operation of the steam plant, as did witnesses Longley and Miller.

Witness E. J. Muir, Tennessee Valley Authority engineer, estimated that the plant use would be approximately 5 per cent of the amount of power and energy generated, but that the transmission line loss of power, due to transmission from Columbia to Nashville, would be 1.96 per cent. Mr. Muir also differed from other witnesses in that in determining the cost of power purchased from the Tennessee Valley Authority at Columbia, Tennessee, and also in determining cost of power purchased from the Tennessee Valley Authority at Columbia, Tennessee, and also in determining cost of power purchased from the Tennessee Valley Authority delivered in Nashville, Tennessee, by assuming that power would be purchased by establishing a kilowatt demand based on the number of required kilowatt hours being purchased on an 85 per cent load factor basis. This would result in a demand charge being materially lower and lower energy charge due to application of the rate than if the kilowatt hours of energy were purchased upon load factor requirements, as testified to by representatives of the company.

All witnesses, with the exception of Mr. Muir, calculated depreciation or retirement expense upon the sinking-fund method. Mr. Muir calculated depreciation or retirement expense upon the straight-line method.

[1] In Mr. Muir's exhibit we find that he has allowed a charge to depreciation on the basis of 4½ per cent on original investment or $90,000 per year, and that he has not depreciated or reduced the investment in the plant but has considered the investment to be $2,000,000 throughout the operating life of the plant upon which he figures the cost of money at 6.17 per cent. The depreciation expense of $90,000 per year, if invested in property or securities to return 5½ per cent, would accrue a reserve over the period of the life of the property amounting

to $3,742,738.56. This reserve would be excessive in the amount of $1,742,738.56, showing that Mr. Muir has set up too high a charge for depreciation by approximately $40,000 a year; or, if depreciation is set up on a straight-line basis at $90,000 the investment should be reduced by the amount received through operating expense charged to depreciation, and this would result in the average investment over the period of twenty-two years being approximately half of the amount of $2,000,000, or there would be a cost of money in Mr. Muir's set-up of approximately $58,000 a year more than necessary if the investment is retired by the amount of $90,000 each year. It is necessary therefore that correction, adjustment, and revision be made of the testimony of the witnesses, and we are setting out below comparative statements of witnesses revised:

This statement also shows the comparison of cost of producing energy by steam and purchasing energy from the Tennessee Valley Authority, according to testimony of witnesses as corrected, although the comparisons are not on exactly the same basis, since witnesses differed in kilowatt-hour use at the steam plant and kilowatt-hour loss in transmission.

All witnesses presenting evidence relative to necessary investment in the steam plant estimated this investment to be in round figures, $2,000,000. The cost of money as testified to by all witnesses would be 6.17 per cent. Witnesses were also agreed as to the rate that should properly be charged for taxes and used 1.5 per cent.

Depreciation or Retirement Expense

Witnesses Longley, Miller, and Wilkinson set up as allowable expense for depreciation 2½ per cent, which was set

	Longley Miller	Moreland
1. Total annual costs steam station to 110-kv. ring (revised) ..	$459,276.00	$462,676.00
Purchase price Columbia	477,090.00	462,638.88
Fixed charges transmission line C-N	98,310.50	43,014.00
Fixed charges substation	.....	33,014.00
Operation and maintenance T & S	7,415.00	7,415.00
2. Total cost purchased power Columbia delivered over T.E.P. transmission line to Nashville	$582,815.50	$546,018.88
3. Annual savings steam over purchased	$123,539.50	$83,405.88

	Wilkinson	Muir
1. Total annual costs steam station to 110-kv. ring (revised) ..	$453,776.00	$434,005.43
Purchase price Columbia	477,090.00	460,132.11
Fixed charges transmission line C-N	86,615.00	41,052.26 [1]
Fixed charges substation	.....	30,710.78 [2]
Operation and maintenance T & S	7,415.00	7,415.00
2. Total cost purchased power Columbia delivered over T.E.P. transmission line to Nashville	$571,120.00	$539,310.15
3. Annual savings steam over purchased	$117,344.00	$105,304.62

[1] Based on Moreland value for substation of $332,900.00—Fixed charges for depreciation on straight-line basis—4½%.

[2] Based on Muir value for transmission line of $445,000.00—Fixed charges for depreciation on straight-line basis—4½%.

up on a sinking-fund basis, estimating the average plant life would be approximately twenty-two years, and that the fund accrued in the reserve would be invested so as to earn 5½ per cent interest.

Professor Moreland, witness for the company, used the sinking-fund method for determining the amount of depreciation to be charged to operating expenses and assumed that the money accrued in the depreciation reserve would be invested in property of the company so as to earn 6.17 per cent, or what it was costing the company to obtain money, and with a plant life estimated to be approximately twenty-two years used a rate of 2.25 per cent for depreciation as a proper rate to be charged to operating expenses.

Mr. E. J. Muir, Tennessee Valley Authority engineer, stated that depreciation should be set up on a straight-line basis and with an estimated plant life of approximately twenty-two years set up as a charge for depreciation 4.50 per cent. However, in the application of the straight-line basis no consideration was given by Mr. Muir to the retirement of the investment in plant each year, or to the accruals to the reserve based upon investing the accruals of the depreciation reserve.

The total annual fixed charges on the investment of $2,000,000 therefore will be for:

Longley and Miller	$203,400.00
Moreland	198,400.00
Wilkinson	203,400.00
Muir	243,400.00

We again point out that Mr. Muir used this figure of $243,400 as an annual charge comparable with the charges of other witnesses.

We are, however, of the opinion that this is misleading and that Mr. Muir is in error in assuming this charge to be the annual charge throughout the period of operation of the plant, since if the depreciation charge of $90,000 per year were invested in property of the company to earn only 5½ per cent, the amount accrued in the reserve at the end of the life of the property would be $3,742,738.56 which is excessive by $1,742,738.56. However, if, as Mr. Muir insists, the straight-line method should be used for setting up depreciation, the net investment should be reduced each year and the cost of money therefore would be decreased so that the annual average cost of money over the period of the life of the plant should be decreased by $58,306.50 for the average year. This would leave annual fixed charges on the investment of the steam plant for the average year $185,093.50 in lieu of $243,400.

Operating Cost

Witnesses Longley, Miller, Wilkinson, and Muir, Tennessee Valley Authority engineer, all testified to the effect that annual charges for labor, maintenance and supplies would be $94,600.

Mr. Moreland used an annual charge for labor, maintenance, and supplies of $103,000.

On basis of operations of the plant as proposed by the company, witnesses Longley, Miller, and Moreland used for fuel cost a price of $2.10 per ton delivered at the plant and estimated the total fuel cost to be $140,000.

Witnesses Muir and Wilkinson estimating a slightly different coal consumption estimated the fuel cost to

be $134,500, using a price of $2.10 per ton for coal delivered at Bordeaux.

In this connection the Commission is presented with evidence showing that coal could be purchased at the price of $2.10 per ton delivered in Nashville. Witness for the company testified to the effect that the company has been and is now purchasing coal at a price averaging not more than $2.10 per ton, and witness Justin Potter, a large coal dealer, testified to the effect that he would be glad to furnish all of the necessary coal over a period of years at a price of $2.10 per ton.

The total annual costs of operating the steam plant, on the basis of use as proposed by the company for labor, fuel, maintenance, and supplies are, according to the witnesses:

Longley and Miller	$234,600.00
Moreland	243,000.00
Muir and Wilkinson	229,100.00

The total annual cost of operating the steam plant therefore, including fixed charges such as interest, taxes, and depreciation and operating costs such as labor, fuel, maintenance, and supplies, is as follows:

Longley and Miller	$438,000.00
Moreland	441,400.00
Wilkinson	432,500.00
Muir corrected basis	414,193.50

In order to determine the total cost of putting energy on the 110-kilovolt ring there are additional costs to be added for steam plant operation.

Witness Moreland is the only witness to take into consideration substation and lines necessary in connection with operation of the steam plant. The Commission is of the opinion that such investment is necessary and that the cost should be considered in determining the total annual cost of operation of the steam plant plus transmitting energy to 110-kilovolt ring.

Witness Moreland used a figure of $21,276, which amount has been added to estimate of cost of other witnesses in making correction for items not included in their testimony.

In making correction of Mr. Muir's testimony the amount of $19,812.03 was used allowing for the rate of depreciation as testified to by Mr. Muir on the straight-line basis. Therefore the total annual cost of operation of the steam plant for the transmission of energy to the 110-kilovolt ring in Nashville is as follows:

Longley and Miller	$459,276.00
Moreland	462,676.00
Wilkinson	453,776.00
Muir, corrected st. line basis	434,005.53

Power Requirements

All witnesses for the company based the power needs of The Tennessee Electric Power Company in the Nashville area at 25,000 kilowatts and 121,382,000 kilowatt hours of energy for the year 1938. This data was set out in prepared exhibits of all witnesses and was submitted in detail by O. J. Miller, witness for the company.

Additional load and use requirements were shown in estimate of the various witnesses, especially witness Moreland showing in detail anticipated requirements up to July 31, 1942. This witness showed greater savings in steam plant generation on the load factor and use basis as proposed by the company for larger amounts of firm power than if power were purchased on the proposed rate.

Witness E. J. Muir, Tennessee Valley Authority engineer, used the kilowatt-hour requirements as estimated by the company witnesses as the

amount of energy required, but in his original testimony proposed to furnish the amount of energy required as stated by the company on an estimated demand assuming that energy could be purchased on an 85 per cent load factor. This would result in much smaller demand than stated as needed by witnesses for the company and would result in comparing energy purchased on an 85 per cent load factor with the same amount of energy generated at the steam plant on a 55.4 per cent average annual load factor.

Nowhere in the testimony was it proved that the company estimates for power or energy demand were in error. Mr. Muir in his own words (R–p. 393) gave reason for his assumption of power demand requirements as follows: "Well, when you set up the cost for your steam plant you assume the most economical manner of operation, in order that you could obtain the lowest possible average cost. Well, under the proposed contract, I assumed the best use of this proposed power contract, in order to secure the maximum benefits that could be accrued. That is the way I did it."

Upon the basis of Mr. Muir's testimony it would appear that the company needed in the Nashville area only additional kilowatt hours. The Commission, however, is of the opinion that the need of the company in the Nashville area is not only kilowatt hours but power to supply the anticipated demand. This would mean that there should be additional kilowatt installation or additional kilowatt supply available to meet the demand in the Nashville area.

In the order issued in this case the Commission stated on April 14, 1937, that "it appears to the Commission from information presented before it that the power demand upon the system of The Tennessee Electric Power Company at Nashville, Tennessee, having grown to such an extent that there is in the event of failure of any one transmission line or failure of a generating unit a possibility of a power shortage in the Nashville area and the Commission is of the opinion that in order that The Tennessee Electric Power Company may be in position at all times to furnish adequate and proper service to meet the possible power demand of the Nashville area, immediate arrangements should be made by the company to insure that it will be enabled to do so."

With that opinion in mind the Commission issued the order. Information is also before the Commission in the records of this case that the present steam plant in Nashville, Tennessee, was operated in 1936 at approximately 15 per cent annual load factor, and it would appear to the Commission that if only additional kilowatt hours were needed it would be a very easy matter to get the additional kilowatt hours from that particular plant and still operate on a comparatively low load factor. If it is only necessary to have standby service to take care of an emergency in load conditions the cost of such standby service furnished by the steam plant proposed to be built at Bordeaux, Tennessee, would appear to be less than the cost of standby service purchased from the Tennessee Valley Authority on the proposed contract filed in this case, since that contract has a minimum guaranty clause of 60 per cent annual load factor.

It is also stated in the record that the Tennessee Valley Authority did not desire to furnish only standby power but desired to sell firm power, together with undesignated amounts of secondary power. This statement would appear to be true since there is attached to the rate schedule the minimum guaranty rate clause of 60 per cent annual load factor, which makes the contract prohibitive in cost for standby service alone.

We are setting out below revised, adjusted, and corrected annual cost of operation of steam plant with energy transmitted to the 110-kilovolt ring compared with the cost of energy purchased in Columbia, Tennessee, and transmitted by The Tennessee Electric Power Company over its transmission lines to Nashville:

	Longley Miller	Moreland
Revised steam station costs	$438,000.00	$441,400.00
Steam plant substation and lines		
Fixed charges	20,154.00	20,154.00
Operation	1,122.00	1,122.00
Total annual costs—steam station to 110-kv. ring	$459,276.00	$462,676.00
Purchase price Columbia	$477,090.00	$462,638.88
Fixed charges—T.E.P. transmission line	98,310.50	43,014.00
Fixed charges—on substation	.....	33,014.00
Operation and maintenance	7,415.00	7,415.00
Annual saving steam station over purchased at Columbia	$123,539.50	$83,405.88

	Wilkinson	II. Muir Corrected St. Line Basis
Revised steam station costs	$432,500.00	$472,500.00 [6]
Reduction in fixed charges	.....	58,306.50 [1]
Revised steam station costs	$432,500.00	$414,193.50
Steam plant substation and lines		
Fixed charges	20,154.00	18,690.03 [8]
Operation	1,122.00	1,122.00
Total annual costs—Steam station to 110-kv. ring	$453,776.00	$434,005.53
Purchase price Columbia	$477,090.00	$379,835.64 [2]
Fixed charges—T.E.P. transmission line	86,615.00	41,052.26 [5]
Fixed charges—On substation	.....	30,710.78 [3]
Operation and maintenance	7,415.00	7,415.00 [4]
Cost of power purchased Columbia delivered by T.E.P. to Nashville	$571,120.00	$459,013.68
Annual savings steam station over purchased at Columbia	$117,344.00	$25,008.15 [7]

[1] By changing fixed charges on cost of money to average investment of $1,055,000.00.
[2] Demand is determined by delivering kw. hr. required at 85% load factor.
[3] Substation Investment assumed to be approximately $332,900.00 by Moreland—Moreland transmission less than Mr. Muir, so Moreland value used.
[4] Allowing $7,415.00 for operation and maintenance—as allowed by Moreland.
[5] Based on Muir estimated transmission line cost.
[6] Allowing depreciation expense at 4½% and cost of money on total investment. Not corrected for average period.
[7] Saving steam generation over purchase even on an 85% load factor basis.
[8] By changing fixed charges on cost of money to average investment as used by Moreland, although allowing 4½% depreciation.

Annual Savings Steam Generation over Purchased Power

It will be noted from the corrected statement of witnesses set out above that all witnesses show a savings by producing the energy at the steam plant over purchased energy from the Tennessee Valley Authority at Columbia, Tennessee.

The Commission finds that in so far as the question of comparative costs of furnishing the power requirements by The Tennessee Electric Power Company (in the Nashville area) the evidence shows the annual savings of steam generation at the proposed Bordeaux Steam Plant over purchased power from the Tennessee Valley Authority to be as follows:

Longley and Miller	$123,539.50
Moreland	83,405.88
Wilkinson	117,344.00
Muir	105,304.62

These comparisons are upon the basis of energy purchased from the Tennessee Valley Authority at Columbia, Tennessee, the nearest source of power of the Tennessee Valley Authority at this time and transmitted to Nashville, Tennessee, by The Tennessee Electric Power Company over its transmission lines.

In the statement revised above as to testimony of Mr. Muir the comparison is made on the load factor and use as proposed by the company.

Mr. Muir, however, shows the following on his corrected straight-line basis for depreciation set up with energy purchased, according to the kilowatt-hour requirements of The Tennessee Electric Power Company but on an 85 per cent load factor basis:

Total annual cost steam station to 110-kv. ring (revised)	$434,005.53
Purchased Columbia and delivered Nashville by The Tennessee Electric Power Company on basis of load factor and use, as proposed by E. J. Muir, namely; 85%	459,013.68
Savings steam over purchased	25,008.15
Total annual steam station cost to 110-kv. ring (revised)	434,005.53
Purchased Nashville delivered by the Tennessee Valley Authority in Nashville on the load factor and use, as proposed by E. J. Muir, namely; 85%	415,757.90
Savings purchased power from Tennessee Valley Authority delivered in Nashville at an 85% load factor over generation of steam 55.4% load factor basis	18,247.63

From the testimony of witnesses the Commission finds that all witnesses, including Mr. E. J. Muir, Tennessee Valley Authority engineer, show a savings in favor of steam generation at the proposed Bordeaux plant over purchased power from the Tennessee Valley Authority whether purchased in Columbia, Tennessee, and delivered by The Tennessee Electric Power Company in Nashville, or whether purchased from the Tennessee Valley Authority delivered by the Tennessee Valley Authority in Nashville on the basis of power requirements and use, as testified to being the needs of The Tennessee Electric Power Company in the Nashville area.

Upon the basis of use and load factor assumed at 85 per cent, as proposed by E. J. Muir, Tennessee Valley Authority engineer, in order to determine the demands, using the number of required kilowatt hours, as stated by witnesses for The Tennessee Electric Power Company, there is a savings in favor of steam generation at the proposed Bordeaux steam plant over the purchase of power at Columbia by The Tennessee Electric Power

Company and delivered in Nashville over The Tennessee Electric Power Company transmission lines.

Witness Muir though shows a savings in favor of purchase of power from the Tennessee Valley Authority delivered by the Tennessee Valley Authority in Nashville over generation of power in Nashville at the Bordeaux steam plant, on the assumption that the necessary kilowatt hours, as stated by The Tennessee Electric Power Company, would be purchased from the Tennessee Valley Authority on a load factor of 85 per cent.

The Commission, however, is of the opinion that consideration must be given to the actual needs and requirements of the power company, as set out in the record, and all witnesses with the exception of Mr. Muir use an average annual load factor of 55.4 per cent with the statement that 25,000 kilowatts of power is necessary. Mr. Muir uses the number of kilowatt hours set out as needed by The Tennessee Electric Power Company and assumes that this power would be purchased on an 85 per cent load factor basis for the sole reason that in his opinion such basis would be the most economical under the proposed contract.

Therefore, Mr. Muir uses demands ranging from approximately 11,000 to 20,000 kilowatts during the twelve months' period. These lower demands result in much lower costs for purchased energy than if demand figures comparable to those used for generation cost had been used, not only because of savings on demand charges alone, but also because the demand affects the amount of energy that must be purchased before realizing the benefits of the lowest block of the rate schedule.

Proposed Power Contract

We are setting out below the proposed power contract used in the testimony in this case:

3/16/37

OUTLINE OF A PROPOSED POWER CONTRACT BETWFEN TEP AND TVA

(*Tentative—For purposes of discussion only*)

1. TVA will sell and TEP will buy the following amounts of firm power for delivery at Wilson dam and Columbia, Tennessee:

For the year beginning 7/1/37 ... 25,000 kw.
For the year beginning 7/1/38 ... 50,000 kw.
For the period 7/1/39 to 6/30/47 75,000 kw.

2. The firm power rate shall be as follows:

Demand charge: 81¢ per kw. per month

Energy charge: Per kw. hr.
First 100,000 kw. hr. per period @ 3.6 mills
Next 200,000 kw. hr. per period @ 2.7 mills
Next 700,000 kw. hr. per period @ 2.25 mills
Excess up to 360 times contract demand ..... @ 1.8 mills
All excess kilowatt hours per period ..... @ 1.35 mills

Minimum guaranty of 60% annual load factor, exclusive of any energy taken in any month in excess of 720 times the contract demand.

3. TEP's firm power obligation shall be reduced in the amount of any load acquired by a municipality now served by TEP.

4. TVA may cancel its obligation to supply one, two, or all of the 25,000 kw. blocks upon five years' notice in writing if said power is necessary in its judgment to satisfy the requirements of municipal or coöperative customers.

5. TEP shall stand by for the TVA load at Columbia. TVA shall stand by for the TEP load at Nashville and Columbia.

6. In addition to the firm power purchased and sold hereunder, TEP shall have the right to buy secondary power whenever in the judgment of Authority such power is available. The rate schedule for such power shall be as follows:

Energy charge: 1.35 mills
Demand charge: None

7. All power shal be billed at the primary rate up to 720 times the contract demand.

8. In addition to primary and secondary power purchased and sold hereunder, TVA may tender blocks of fugitive power when, as and if, in its judgment, available.

Price: 1.1 mills per kw. hr.

9. Energy delivered at Columbia shall be computed as of Wilson dam delivery.

All witnesses with exceptions of Mr. E. J. Muir, Tennessee Valley Authority engineer, used a demand of 25,000 kilowatts, while Mr. Muir used, as previously stated, demands ranging from approximately 11,000 to 20,000 kilowatts.

It appears to the Commission from a study of this contract that there is a question as to the correct interpretation of this contract. It will be noted that in paragraph 1 of the contract, it is set out that "the Tennessee Valley Authority *will sell* and The Tennessee Electric Power Company *will buy* the following amounts of firm power for delivery at Wilson dam and Columbia, Tennessee, for the year beginning July 1, 1937, 25,000 kilowatts; for the year beginning July 1, 1938, 50,000 kilowatts; for the period beginning July 1, 1939, to June 30, 1947, 75,000 kilowatts.

From this contract it appears that it will be necessary for The Tennessee Electric Power Company to buy firm power in the amounts set out in paragraph No. 1, namely; 25,000 kilowatts in 1937; 50,000 kilowatts in 1938, and 75,000 kilowatts from July 1, 1939, to June 30, 1947.

If it is necessary for The Tennessee Electric Power Company to purchase 25,000 kilowatts of firm power in this contract Mr. Muir's assumption of kilowatt-hour use on an 85 per cent load factor basis is not in accordance with the contract, since it will be necessary to have a minimum demand of not less than 25,000 kilowatts.

Rate for Transmitted Power

We are setting out below copy of rate of the Tennessee Valley Authority used by Mr. Muir as applicable to cost of energy delivered by Tennessee Valley Authority in Nashville for sale to The Tennessee Electric Power Company:

TENNESSEE VALLEY AUTHORITY

Wholesale Power Rate Schedule A-1

Availability

Transmitted firm power purchased for resale available to states, counties, municipalities, and coöperative organizations of citizens or farmers.

Demand charge

$0.90 per kw. demand per month.

Energy charge

First 100,000 kw. hr. consumed per month at 4 mills per kw. hr.
Next 200,000 kw. hr. consumed per month at 3 mills per kw. hr.
Next 700,000 kw. hr. consumed per month at 2.5 mills per kw. hr.
Excess over 1,000,000 kw. hr. consumed per month at 2 mills per kw. hr.

Charge for energy in excess of 360 times the total measured demand as hereinafter defined shall be subject to a reduction of 0.5 mills per kw. hr. from the otherwise applicable rate.

Determination of demand.

Demand measurement shall be made by suitable instruments at the point of delivery. Total measured demand for any month shall be defined as the highest integrated simultaneous load during any sixty consecutive minute period during the month for which determination is made.

Adjustment of demand charge for power factor

The customer's demand shall, whenever the normal power factor is less than 85%, be determined upon the basis of 85% power factor; that is, whenever said normal power factor is less than 85%, the demand in kilowatts shall be taken to be 85% of the kilovolt amperes.

Minimum monthly bill

0.90 kw. of demand, but in no case shall the minimum bill be less than the charge for 60% of the highest demand occurring during any month within the previous consecutive twelve months' period.

Allowance for sales to residential customers

Authority will adjust bill so that customer shall be billed at 2 mills per kw. hr. for at least so much energy as may be sold by customer under the residential resale schedule at 4 mills per kw. hr.

Discount for nontransmitted power

Above rates subject to a discount of 10% if necessary transmission facilities are furnished by customer and power is purchased at the switchboard of the Authority's hydroelectric generating plants.

Single point delivery

The above rates are based upon the supply of service through a single delivery and metering point, and at a single voltage. Separate supply for the same customer at other points of consumption, or at different voltage, shall be separately metered and billed.

Statute Governing Issuance of Securities

[2–4] This Commission has jurisdiction over the issuance of any securities by public utilities operating in the state of Tennessee, and it is provided in the Code of Tennessee, § 5452, Par. (d) as follows:

"No public utility shall: .... (d) Issue any stocks, stock certificates, bonds, debentures, or other evidences of indebtedness payable in more than one year from the date thereof, until it shall have first obtained authority from the Commission for such proposed issue. It shall be the duty of the Commission after hearing to approve any such proposed issue maturing more than one year from the date thereof upon being satisfied that the proposed issue, sale and delivery is to be made in accordance with law and the purpose of such be approved by the Commission. No lease of its property, rights, or franchises, by any such public utility, and no merger or consolidation of its property, rights, and franchises by any such public utility with the property rights and franchises of any other such public utility of like character shall be valid until approved by the Commission, even though power to take such action has been conferred on such public utilities by the state of Tennessee or by any political subdivision thereof."

It is the opinion of the Commission that before any security issue should be approved the Commission must be satisfied that the sale and delivery is to be made in accordance with law and the purpose of such issue approved by the Commission.

In the case under consideration at this time the statute as set out above must be interpreted by the Commission to mean that it is the duty of the Commission to satisfy itself that the proposed issuance of securities is found necessary and for proper purpose, looking not only to the interest of the holders or purchasers of securities of the company, but determining whether such investment will result in benefits to the ratepayers and the general public and meet the needs of the company's customers.

[5, 6] Although the availability clause of the rate states "Transmitted firm power purchased for resale available to states, counties, municipalities, and coöperative organizations of citizens or farmers," witness Muir in the Department of Rates and Research of the Tennessee Valley Authority said the rate would be available for power to be sold to The Tennessee Electric Power Company and the witness used the rate in one calculation.

In this case the Commission is of the opinion from the evidence before it that there is a need for arrangements to be made by The Tennessee Electric Power Company to take care

of the possible power demands of the general public in the Nashville area. The Tennessee Electric Power Company proposes to build a steam generating station to furnish the necessary amount of power for its immediate needs of the Nashville area, and in connection with the building of this plant desires to issue $1,500,000 of its first and refunding mortgage 5 per cent bonds and to apply the proceeds received from the sale thereof to the construction of said plant. The purpose of the issue is manifestly proper and from the evidence presented to the Commission the production of power by the proposed plant is the cheapest source of power now available to The Tennessee Electric Power Company to meet its power requirements for the Nashville area.

There is evidence in the record and the Commission also takes judicial knowledge of the fact that there exists and is available in Tennessee an enormous amount of power generated by the Tennessee Valley Authority, a United States governmental agency, which power, under the proposed contract filed in this case, is available to The Tennessee Electric Power Company, but it does not appear from the record that the rates at which the power is to be sold to The Tennessee Electric Power Company will result in any advantage to the customers of The Tennessee Electric Power Company, to the general public or to said company, since the company according to the overwhelming testimony of all witnesses can generate power cheaper than it can purchase it under any rate proposed for the power needs as stated by witnesses for the company, which witnesses certainly should best know the anticipated power requirements.

Where savings are made by the purchase of energy over what it would cost to produce and transmit it there should result a lowering of the cost of the product to the ultimate consumer. Instead of a saving resulting in this particular case it appears from the testimony of competent witnesses that electrical energy can be produced at the proposed Bordeaux steam plant cheaper than a like amount of power and energy can be purchased from the Tennessee Valley Authority on rate schedules now before the Commission. With such evidence before it, notwithstanding the desire of the Commission to see that the greatest possible use is made of public power to the end that the general public may get the lowest possible rates and be benefited by the production of cheap power, the Commission finds that the cost is less to The Tennessee Electric Power Company to build a steam plant to produce power than to purchase power at the rate proposed and it cannot do otherwise than approve the purpose of the security issue.

Under regulation of the Commission the consumer of current should pay no more than the cost of the current produced, plus the cost of distributing same and regardless of the individual opinions of the members of the Commission that power should be purchased from power supply already available, we find nothing in this record to justify a finding that the securities should not be issued for the purpose of building a steam plant.

It is the understanding of the Commission that it is the purpose and intent of the Tennessee Valley Author-

ity Act that electrical energy be produced and sold and at low rates so that every possible benefit may be given to the ultimate user of the current. This Commission desires that the public receive current at the lowest possible cost and while it has no jurisdiction as to the question of territory to be served by the governmental agency distributing current in the state of Tennessee, it is of the opinion that the public would benefit materially if arrangements could be worked out between the Tennessee Valley Authority and The Tennessee Electric Power Company whereby the company could purchase power not only for the Nashville area, but for the company as a whole at a substantial savings over the cost of producing energy by steam and the customers of the company thus be put in a position where they could secure immediate benefits from savings in cost of power to the company by reduction in rates.

The officials of The Tennessee Electric Power Company in this record have offered to sell the entire property to the Tennessee Valley Authority at any time the Tennessee Valley Authority desires to purchase it at a fair value, and the Commission is of the opinion from information presented that the building of this proposed steam plant would not be an economic loss but would be necessary as a standby and as a peak load plant even if the property were purchased by the Tennessee Valley Authority, since it could be operated in conjunction with the power facilities in the Tennessee Valley at this time, which would result in a more advantageous use of power from all sources available, making the production of power more economical by a combination of steam and hydro, as is well known by all eminent engineers and economists.

Previous to the order of the Commission in Docket No. 2054, issued March 15, 1937, The Tennessee Electric Power Company had already made commitments for equipment and land amounting to approximately $750,000, looking toward the erection of a steam generating plant at Bordeaux. Since these commitments have already been made there would result a loss of several hundred thousands of dollars if cancellation were made, which loss would have to be borne by the company.

Witnesses testified to the fact at this time the cost of money is lower than it has been for several years and that in their opinion the cost of money will increase in the near future, so that if it is necessary to raise money for construction of property the present time is more advantageous than the immediate future.

Witnesses further testified to the fact that the earnings of The Tennessee Electric Power Company are such as to justify materially lower costs of its money, since many companies with a financial set-up no better than The Tennessee Electric Power Company are issuing bonds with interest at 3¼ per cent to 4½ per cent and that if any certainty as to the future operations of the company can be forecast favorably The Tennessee Electric Power Company can now secure its money at much lower cost.

[7] The earnings of the company at this time are more than adequate to meet its interest requirements and although counsel for the Commission calls attention of the Commission to

the fact that value of the securities of the company on the market are selling very low and that "at present its preferred stock is selling at around 60, although if it were not for the serious possibilities that its business will be destroyed, such stock would be selling at par. (Test. Pearson Winslow R. P. 157.) It hardly seems fair to the preferred stockholders in a company facing such prospects to allow $2,000,000 of their funds to be spent on an investment which in event of the liquidation of their company would not enhance the value of its assets, and would but increase the amount which would be paid bondholders before stockholders' equity would begin." The Commission cannot assume that money invested in actual property used in rendering service to the public economically would not add some value to the property. Nor can the Commission assume that any agency of the government of the United States will make valueless prudent and necessary investments in property serving the public.

Since the present bonded indebtedness is only slightly over 50 per cent of the book investment and there exists a large equity for the common stockholders, it would appear that in any dilution of the equity of the stockholders the common stockholders would suffer most and these holders of the common stock are to be the purchasers of the bonds to be issued.

There does not appear to be a single protest from any security holder of the company against the issuance of the securities petitioned for, while on the contrary the owners of the common stock of the company will purchase the entire issue of bonds at a price of 90 or higher, which price is above the quoted market price at which the securities are now selling.

If the company should not be permitted to issue any additional securities for proper purpose when a market can be found for these securities, the Commission would be put in a position where it could no longer order the company to make extensions of its service to serve additional urban and rural customers, but the growth of the property would be stopped and the public would have to wait for electric service to be furnished at the will and pleasure of the company or wait until some other company, government agency, coöperative, or association, decided to serve them.

[8] This Commission is of the opinion that expenditures for proper purpose when economically justified should be approved and that it should go further and require utilities over which it has jurisdiction under the laws of the state of Tennessee to make extensions to its property whenever in the judgment of the Commission such extensions are needed by the public and are justified economically.

In the current case before the Commission an order was issued calling upon the company to place itself in position to render adequate service which the Commission knew would require an expenditure of capital regardless of whether power could be purchased advantageously or whether there would be necessity for the building of a steam plant to furnish the power.

Necessity for Steam Plant

Representatives of the company testified to the fact that it has been

the policy of the company to provide adequate steam generating plant capacity in Nashville and that until the period of the depression there has always been ample capacity available. Witnesses further testified that even if the company was permitted to build the proposed new steam plant at Bordeaux, it would be necessary to make further arrangements in the future to provide additional power supply, either through enlargement of the existing plant facilities of the company, or through the purchase of power from other sources. Officials of the company also testified that even if an advantageous contract could be worked out satisfactorily to the Tennessee Valley Authority, the company still desired to build the steam plant in Nashville in order adequately to protect its present and future users of power.

[9] Since the officials and directors of the company deem it necessary that additional power facilities be installed immediately the Commission is of the opinion that it should not substitute its judgment for the judgment of the officials and directors of the company unless it should be clearly shown that the public would not be benefited and the users of the company's service be affected adversely. While this Commission under the laws creating it is in no sense a "Blue Sky Body," it is of the opinion that the investing public should be protected to the utmost. This Commission has not and does not by approving the issuance of securities pass upon the value of the securities in any way, but it does approve the purpose of the issue and requires that the moneys received from the sale of the securities be invested in the property of the company.

Well qualified investment bankers testified in this case to the effect that it would be more desirable for the company to own and control its own generating plants rather than to be dependent upon its power supply on a contract that could be terminated on five years' notice. This would prevent the company enterirg into long period contracts to supply large industry since there would exist an uncertainty as to probable costs in the future.

Experts well qualified to testify as to steam plant service presented testimony to the effect that steam plants are not subject to the same extent to atmospheric disturbances by lightning, storms, tornadoes, etc., as transmitted power carried hundreds of miles over transmission lines and that it is good management to provide steam plant capacity near the load center in order that an adequate and dependable power supply be always available.

Testimony was also presented to show how the general public welfare is served by the operation of a steam plant since labor is employed continuously in the operation of the plant itself and in the production of coal which benefits the coal miners, the owners of the mines, and labor transporting the coal from mine to plant, in that employment is thus created.

In considering the question of the general public welfare in this case, the Commission gives some consideration to the fact that part of the operating costs of the steam plant goes back to the public in the form of taxes, and

Davidson county and the state of Tennessee will receive, according to testimony, approximately $30,000 annually.

Hydroelectric power should be sold at a cost less than the cost of producing same by steam so that the savings could go back to the public in the form of lower rates.

Taking into consideration all of the testimony and facts before the Commission and guided by the applicable laws of the state of Tennessee, the Commission is of the opinion that the weight of the evidence is so overwhelmingly in favor of erection of the proposed Bordeaux steam plant in lieu of the purchase of power from the Tennessee Valley Authority, under its proposed rates, that the Commission must approve the purpose of the security issue and therefore grant its approval for the issuance of the securities as prayed for.

In approving the issuance of the bonds as petitioned for the Commission does so without in any way attempting to place a value on same at this time or expressing any opinion as to what the value will be in the future.

The Commission finds that there is the necessity for The Tennessee Electric Power Company to provide facilities to meet the power requirements of the Nashville area, and that the construction of a steam plant affords the most economical means of accomplishing this purpose and that The Tennessee Electric Power Company should be directed to build a 25,000 kilowatt plant in or near Nashville, Tennessee. The Commission is of the opinion that the company has already made expenditures to its property not now bonded and proposes to make additional expenditures more than sufficient to justify the issuance of the amount of the bonds now petitioned for and allowed under its mortgage.

It is therefore *ordered* by the Commission, that The Tennessee Electric Power Company be, and it is hereby granted approval to issue $1,500,000 principal amount of its first and refunding mortgage bonds, 5 per cent series, due June 1, 1956, under the terms of the mortgage securing the same and to sell said bonds at the best price obtainable, but not less than 90 and accrued interest, and to apply the proceeds therefrom to the extent thereof toward the reimbursement of its said capital expenditures made, or to be made in the erection of a steam electric generating plant to be located at Bordeaux, Tennessee, and

It is *further ordered,* that The Tennessee Electric Power Company begin construction immediately of said steam power plant of 25,000 kilowatts capacity to be located at Bordeaux, Tennessee, in order that the public in the Nashville area be assured of adequate, safe, and reasonable service.

It is *further ordered,* that the Commission retain jurisdiction in this case and issue such further and future orders as it may deem necessary from time to time.

Commissioner Jourolmon dissents.

JOUROLMON, Commissioner, dissenting: There are three separate and distinct grounds which in my opinion should determine the ruling of the Commission on this issue. On any one of these grounds authority should be denied to The Tennessee Electric Power Company for the issuance of

$1,500,000 of its bonds to be used in the construction of the steam plant at Bordeaux, Tennessee. These are:

1. The amount of bonds which the company seeks to issue is excessive for the value of the plant which it proposes to build.

2. The applicant for the issuance of said bonds, The Tennessee Electric Power Company, has failed to show that it has made reasonable efforts to obtain additions to its capacity through purchase.

3. The record clearly and finally shows that The Tennessee Electric Power Company can, through purchase of energy from the TVA, effect substantial economies over the best results that it could obtain through production of electricity at the proposed steam plant.

The present application is for the issuance of $1,500,000 worth of bonds in order to construct with their proceeds a steam plant at Bordeaux on the Cumberland river at a construction cost of $2,000,000. It will thus be seen at once that the proportion of bonds to total investment in this case amounts to 75 per cent.

When the hearing in this matter began, the total bonded indebtedness of the company was $49,592,300. But there has since been issued by the company $4,208,000 in first and refunding bonds, thereby increasing this total to approximately $53,000,000. The company's plant is assessed for taxation in Tennessee at $59,000,000. The bonded indebtedness is therefore about 90 per cent of the assessed value of the properties, in spite of the fact that the mortgage under which all Tennessee Electric Power Company bonds are issued allows only 70 per cent of the value of the plant. It is true that the company claims the right to earn upon a rate base of $94,000,000 or more. I regard this as excessive; and even upon a maximum conservative valuation, I greatly fear that the company's bonded indebtedness is now approaching 70 per cent.

When the Commission allows an issue of bonds amounting to 75 per cent of the new investment, it necessarily follows that the aggregate proportion of bonds to all the corporate property is going to be increased. This appears to me to be a most pernicious trend, and upon this basis alone, the authority to issue $1,500,000 in bonds should be denied.

Divorcing this case entirely from the problem of the economics of generation of energy by use of coal-steam as compared with the purchase of hydroelectric energy and testing it from the standpoint of conservative security regulation alone, I believe that this issuance of bonds is wholly unwarranted by the record. Assuming that the purpose is proper and that the steam plant would be a more economically appropriate source of power than a purchase contract, this record still conclusively shows that not more than one million dollars worth of bonds should be approved by this Commission for the purposes set out in the application.

The policy of the Commission should be directed toward the reduction of excessive bonded indebtedness. Fifty per cent should be considered the margin of safety. This Commission should adopt that policy. The effect of this would be to increase the equity of the bonds. It would also increase the equity behind all junior securities.

The very foundation stone of ef-

fective utility regulation is the control of security issues. In past years a gross abuse has resulted from the issuance of bonds and stocks of various classes upon a watered basis, and sometimes securities were issued with hardly more substantial value behind them than "so many square yards of blue sky." If regulatory Commissions in those years had been able to prevent the issuance of such stocks and bonds, many of the intricate and costly problems of present-day regulation would never have arisen. Manifestly, a corporation existing under the profit economy which prevails in this country must in its very nature seek to produce earnings that will pay its bond and preferred stock requirements and leave something over as an increment to be distributed among the owners. Accordingly, I feel strongly that a Commission which authorizes the issuance of bonds or securities without a searching and critical analysis is erecting in the path of its future progress obstacles which will be cast aside only with the greatest difficulty.

The statute requires this Commission to supervise and approve security issues. A narrow construction of the act, under which the Commission's investigation would be so limited that no consideration could be given to the present value of such bonds or their value in the future, runs counter to the main steam of utility regulation in this country. Code of Tennessee, §§ 5447, 5450, subsection C, 5451, subsection C, 5452, subsection D, and 5458. In Wisconsin, for instance, the Commission, before authorizing a security issue, is required by the statute to make appraisals and investigations and on conclusion to make a finding to the effect that the proposed undertakings of the corporation are such as to afford reasonable protection to purchasers of the securities to be issued. Laws of Wisconsin, 1931, Chap. 183, § 184.05 (2).

It is my opinion that this is the theory upon which is vested in a Commission the regulation of security issues and that such was the legislative intent in Tennessee.

Under the Wisconsin statute to which I have referred, it is required that the "business of the corporation, its credit and prospects" shall be given due consideration in the issuance of securities of various classes. Laws of Wisconsin, 1931, Chap. 183, § 184.05 (4).

That the policy of reducing the proportionate amount of bonds is of great importance in Tennessee is clearly demonstrated by some of the testimony adduced at this hearing. Thus, it was testified by two young financial experts from Wall Street that securities of The Tennessee Electric Power Company are at present riding in the trough of a little depression of their own. It was testified that the 5 per cent bonds of this company were selling at a market of $83 and that the preferred stock was selling at a market of $58. Various officials of the company testified that this depression in the market for the corporation's securities was due to doubts as to the prospects of the company in the face of TVA competition.

In my opinion, the depression is occasioned not only by this fear of competition but by doubts as to the soundness of the corporation's financing in past years. The public well knows, for instance, that the company re-

gards its Chattanooga business as approximately one-third of its entire system. Accordingly, it seeks to earn from the Chattanooga area upon a valuation which it sets at about $30,000,000. The public likewise knows that for less than $10,000,000 the municipality of Chattanooga proposes to construct a distribution system which will effectively perform the service now being performed by the expensive plant of the applicant. Such knowledge on the part of the investing public must necessarily have some effect on its acceptance of the securities issued by the company. Undoubtedly there would be little grounds for fear of the effects of the TVA if the bonds of the company had been steadfastly and over a period of years kept upon a conservative basis. . .

Aside from the foregoing, I view another consideration as of equal importance. The opinion of the Commission seems to be founded upon the conclusion that the negotiations between The Tennessee Electric Power Company and the Tennessee Valley Authority had progressed to a point of finality. In my opinion the opposite is true, and the record clearly shows that the power company terminated the negotiations arbitrarily in an early stage, at a time when there was every prospect that it might obtain even lower rates than those already offered by the Authority.

In consequence The Tennessee Electric Power Company has shown no bona fide effort to come to terms with the TVA on a power purchase contract. Officials of the company testified that they discontinued negotiations as soon as they were informed that the TVA would sell The Tennessee Electric Power Company electrical energy at less than the cost at which it could be generated at the proposed Bordeaux steam plant. They pretend that they were shocked that the Authority should make such an offer to give a rate which would compete with steam generation. This indignation but ill beseems them, in my opinion, for memory recalls that there was no such display of moral indignation on the part of the company during the twenties when Muscle Shoals energy was being sold to her sister companies at less than 2 mills per kilowatt hour, nor during the lifetime of the TVA-Commonwealth and Southern contract, when this same company purchased power at even less than the rates now offered.

Of course the TVA's policy of offering electricity at competitive rates is the necessary and logical one for it to pursue. It manifestly would be impossible for the Authority to sell electricity at rates which could not compete with generation through steam. In other words, any industrial plant to which this problem was presented would weigh the cost of purchased electricity against what it could do itself with its own steam plant. It was therefore necessary for the TVA, having a large amount of electricity for sale, to quote rates which would meet or better generation cost of a steam plant, which might be erected not only by The Tennessee Electric Power Company, but by any other large purchaser. But as soon as the company learned that the TVA was prepared to negotiate on such a basis, it terminated the conversations and refused to make its steam plant cost data available to the TVA.

The finding of the Commission to the effect that "it appears that electrical energy can be produced at the proposed Bordeaux steam plant cheaper than a like amount of power and energy can be purchased from the Tennessee Valley Authority on rate schedules now before the Commission" is in direct contravention of the testimony of the power company officials that the Tennessee Valley Authority had stated that if given opportunity it would meet or better the cost of such production. This opportunity The Tennessee Electric Power Company refused to furnish.

It is also clear that the tentative contract which was filed by the company does not in itself prove that the company exerted what could be termed a genuine effort to reach an understanding with the TVA. The contract is labeled, "Tentative and for Purposes of Negotiations Only." There is no clause in this tentative agreement which is not subject to modification by negotiation. The Authority was clearly holding itself out to make changes in the contract when placed in final form. For instance, it is testified and assumed by all the parties that the phrase in the first paragraph, "The TVA *will sell* and TEP Co. *will buy* the following amounts," does not actually comprise a firm contract to sell and buy exactly the amounts set out and that what is actually meant is that the TVA holds itself out as willing to sell any amounts which may be demanded by The Tennessee Electric Power Company up to those mentioned.

This undisputed fact that no genuine effort was made by the applicant to come to an agreement with the TVA, which is tantamount to its failure to make any bona fide attempt to obtain electric energy at the lowest possible cost, seems to me to be determinative of this phase of the case. It is certainly incumbent upon The Tennessee Electric Power Company to make every reasonable effort to obtain electric energy at the lowest possible cost, whether by generation or by purchase. Since it is admitted that there is in existence a source of energy which would be cheaper than that of steam plant generation, the authority to construct a steam plant should not be granted until it is clearly shown that every reasonable effort has been exhausted to obtain such power.

The only excuse advanced by the company for refusing to negotiate with the TVA, after learning that the latter would sell energy at less than it would cost the company to produce it, is that the Authority would not contract to protect the company in its monopolistic control of the territory wherein it operates.

The power company devoted much of its time and many pages of its briefs to arguments that it should not be subjected to the competition of the TVA. It stated that it could exist under regulation but not under competition.

It appears, however, from the proof before the Commission, and indeed from the history of the events of the past five years, of which this Commission can judicially take cognizance, that the competition of the TVA is one of the most effective means of obtaining just utility rates and good service from the power companies. This competition, setting up a yardstick by which utility service and rates

may be measured, has been a most effective ally of the Railroad and Public Utilities Commission in this state in obtaining even the moderately low rates which now prevail in some of the utilities. The rates of the petitioner company, which have been sloping off gently over the entire period of the company's life took an abrupt decline after the TVA came into competition with it.

This Commission knows judicially that the competition of the TVA has had a most beneficial effect upon the utilities of this state. If The Tennessee Electric Power Company were able to induce the TVA to contract that it would desist from all competition with the company, it might be incumbent upon the Commission to refuse its approval of such a contract because of the fact that it would be contrary to the public interest.

One of the prime purposes of Congress in the creation of the TVA is the prevention of monopoly and monopolistic practices on the part of electric utility corporations, and the act under which the Authority was created so implies. 16 USCA § 831–K. The Authority can pursue the intent of the legislative body which created it only by declining to enter into contracts which would guarantee a monopoly to certain corporations for certain areas. The Norris bill provides that the Authority must prefer municipalities and coöperatives in the distribution of its electric current. 16 USCA § 831–I. This it would not be able to do if bound by a contract which in effect would preclude it from selling to any municipality or coöperative in the territory served by The Tennessee Electric Power Company. Indeed, the execution of such a contract on the part of the Authority would probably be *ultra vires*. It is exceedingly doubtful whether this Commission could lawfully give its approval to a contract which would clearly be beyond the corporate powers of one of the contracting parties.

In addressing myself finally to the subject of electricity cost, in my opinion the proof was as convincing as need be, in spite of the fact that the power company did not show any great effort to obtain electricity at the lowest purchase price from the Tennessee Valley Authority, that the rates already offered by the TVA are considerably more favorable to the company than the cost of steam plant generation. The company loaded its estimates at every angle. On cross-examination it was shown that many elements of cost had been systematically ignored. Since the company made so many statements of this type, it is difficult to know how much credence can be placed in any of its testimony. Much of its case was not even presented in sworn testimony, but in the form of various estimates, unsworn to and untested by any searching analysis as to meaning.

I harbor grave doubts of the figure which was accepted by practically all witnesses as to cost of coal over a period of years. This cost is placed at $2.10 per ton. A cost approximating $2.50 or more per ton is far more probable. It is true that one witness for the respondent company testified that he would give bond for the delivery of the coal at $2.10 per ton. Later he withdrew from this offer, testifying that under the coal control act such a contract could not then be

made. One cannot escape the suspicion that the judgment of this witness takes color from his political views as to a government's proper function.

Furthermore, it is admitted that the bituminous coal authority, created and established under the Guffey Coal Act, will control the prices of coal of all classes and will establish fair minimum prices that may be charged by any operator. 15 USCA, § 801, et seq. 807. The actions of this administrative bureau will be determined by the flow of economic law, and any prediction as to the course of this flow during the next ten years must be essentially guesswork. It is not logical to assume that the cost of coal at the Bordeaux plant will, in the face of changing economic conditions, unpredictable in their nature, remain stationary at $2.10 over the entire period of this plant's life.

For instance, the figure of steam coal at $2.10 per ton presupposes that the labor differential of the South will remain as it is. This price means that the coal must be sold at the mine at less than 75 cents per ton, a tremendous burden upon Southern labor. Advancing humanitarian ideals demand that conditions under which such prices are possible should not continue indefinitely, and I cannot assume, in the face of a struggle to abolish the differential unfair to Southern labor, that the lot of the coal miner will remain so degraded over a period of twenty years.

The testimony as to the loss of $250,000 for cancellation of the contracts is unsubstantiated in the record. The price of such equipment has risen in the last few months, and by no process of logic can I conclude that any such cancellation charge would be actually exacted against the company.

The assumption of some of the witnesses as to the necessity for a transmission line from Nashville to Columbia are likewise unsubstantiated. It appears from information otherwise filed with the Railroad and Public Utilities Commission that this transmission line was already considered a necessary expenditure of The Tennessee Electric Power Company in any event. Thus, in the report of The Tennessee Electric Power Company to the Railroad and Public Utilities Commission in February, 1937, there is shown the following under the heading "Construction Work in Progress":

"Construct a 154,000-volt transmission line from South Nashville to Columbia, a distance of 46 miles, of which 6 miles will be double circuit steel towers and 40 miles wood pole H frame, using 336,400 c. m. A. C. S. R.; install at South Nashville substation a 45,000 kilovolt ampere, 154,000/110,000-13,200-volt 3-phase transformer bank composed of four 15,000 kilovolt units. Construct at Columbia a new substation, installing therein 154,000-volt oil circuit breaker and lightning arrester and a 44,000-volt oil circuit breaker. Also construct a 44,000-volt bus and make connections thereto for four 44,000-volt lines to Lewisburg, Franklin, Mt. Pleasant, and Armour . . . $740,-000."

Upon the dispute as to the method of computing depreciation of the steam plant, it is my opinion that curved-line depreciation should be used. I say this in spite of the fact

that I am well aware that the company has not consistently pursued a depreciation policy devoted to this method. The company is in the position of having urged straight-line depreciation methods when it felt that by doing so it could maintain high rates, and of coming to curved-line depreciation when it felt that it was in its interest to do so, as it evidently assumes in the instant case.

However, on the issue as to the cost of energy purchased from the TVA, I agree wholly with the insistence of the attorney for the Commission. It is certain that no well-conducted power company, if it makes a contract for purchased power, is going to purchase it upon the most uneconomic basis that it can conceive. This is, in effect, what the company attempts when it asserts that the purchase of power would be for exactly the same amount hour by hour throughout the various twelve months of the year as would be the case if the power were generated and used by the company from its own plant. Mr. Muir, who is shown by the record to be a well-qualified and capable engineer, and who is shown further to have a thorough knowledge of the methods and technique used by The Tennessee Electric Power Company when it was purchasing energy from the TVA from 1934 until November, 1936, states from the witness stand that there is no probability that the company would purchase from the TVA under any schedule of transmission which would call for the dispatch of 25,000 kilowatt hours in some 60-minute period every month in the year. This statement is reasonable, and in my opinion true. The witnesses for the company, however, proceed upon the assumption that this uneconomic and unwise course would be pursued by the company in its purchases. This assumption would have to be accepted, however, if the Commission would adopt the company's estimates as to the cost of purchased power.

Upon an issue of this type initated by a show-cause order, the burden of proof as to all material questions is upon the utility. Likewise, upon an application for the issuance of bonds, the company must sustain the burden of proof affirmatively. It appears to me that the opinion of the Commission is predicated upon an opposite rule. Thus, it is not incumbent upon those opposing the application of the company to prove that the estimates for power or energy demand were in error. On the contrary, it was incumbent upon the company to prove that such estimates for power or energy demand were correct. In my opinion, the applicant failed wholly to sustain this burden of proof.

In my opinion the following tables briefly set out the comparative annual cost of electricity by the two means which have been outlined before the Commission:

I. Bordeaux Station—Annual Cost

Capital investment—$2,000,000.	
Fixed charges—10.17% on $2,000,000 capital investment	$203,400
Labor, maintenance and supplies	94,600
Coal @ $2.10 per ton (66,666.67 tons)	140,000
Total	$438,000

II. TVA Power, TEP Transmission

Energy charge	$225,767
Demand charge	154,068
Transmission charge—10.17% on $445,000 investment	45,257
Total	$425,092

III. TVA Power at Nashville

Energy charge	$246,112
Demand charge	169,646
Total	$415,758

Thus the use of TVA power transmitted by The Tennessee Electric Power Company from Columbia would be $12,908 cheaper than the cost of generation at Bordeaux, and the cost of TVA power delivered by the TVA to Nashville would be $22,-243 cheaper than the steam plant power. It is true that these amounts of excess are not of great magnitude. However, I regard them as minimum figures. It will be observed that in reaching these figures, I have tentatively resolved those points involving the greatest doubt in favor of The Tennessee Electric Power Company. Thus, I have allowed depreciation at 2.5 per cent which is upon the curved-line basis contended for by the company. I am satisfied that a strong case could be made for the use of the straight-line method, charging 4.5 per cent against the Bordeaux plant for depreciation and still using an undepreciated rate base. This would be for the reason that the company has not consistently reduced its rate base by deducting depreciation as it accrued mathematically and statistically in the past. It might well be said that the company is estopped from now deducting it in the present emergency.

It will be observed, likewise, that I have accepted the figure of $2.10 per ton for coal, and also the amount of coal at 66,666.67 tons. The record indicates that the company actually expects to use 100,000 tons of coal, and in my opinion $2.50 per ton is a more nearly accurate estimate as to to the actual cost than $2.10. These amounts will be subject to manipulation by the company, and it will be a startling thing if the actual performance of the steam plant conforms in all respects with what is said to be expected of it.

Applying straight-line depreciation upon the basis suggested would add a differential of $40,000 to the excess already in favor of TVA purchase. An increase in the cost of coal to $2.50 per ton, which I regard as not at all unlikely, would add $26,000 to the excess in favor of TVA purchase. While, if the actual amount of coal used should turn out to be 100,000 tons, as estimated by some of the witnesses introduced by the company, instead of 66,666 tons, there would be $83,000 more to be added to the excess over TVA purchase. Assuming the presence of all the above conditions, it is possible that the cost of generation at Bordeaux may in some years run as high as $170,000 in excess of the purchase cost of TVA power at Nashville under the tentative contract placed in evidence. Furthermore, for TVA power at Columbia, if the transmission charge, which I regard as unwarranted, is likewise deducted from the total cost of power purchased at Columbia and delivered in Nashville, the excess of steam plant generation over purchase cost may amount to $206,965.

The majority opinion of the Commission appears to me to ignore one other salient phase of the purchase agreement. This is the clause providing for the purchase of blocks of secondary or fugitive power from the TVA. The contract offers these blocks at the extremely low rate of 1.35 mills per kilowatt hour. The

purchase of such amounts would have no effect upon the measured demand of power. The only evidence in the record which indicates the effect of such purchases of power is that with reference to purchase under the old Commonwealth and Southern contract. Under that contract the Tennessee Valley Authority sold tremendous amounts of power on the lowest block of the rate. Those amounts ran as high as 90,000,000 kilowatt hours per year, or almost as much as the total amounts of power estimated by the company as the basis for the exhibits filed in this case. If the same amounts of secondary energy should be purchased under the new contract, the average rate per kilowatt hour would be approximately 2.54 mills, substantially lower than 3.61 mills, the cost of steam-generated energy. Every time The Tennessee Electric Power Company would purchase one of those kilowatt hours at the low rate of 1.35 mills, it would reduce the average cost per kilowatt hour. By this means, it would clearly be possible for the company to effect substantial savings which it is impossible to measure and which would be additional to those savings that have been outlined above.

The increment cost only of power generated at the old steam plant in Nashville is about 2.8 mills per kilowatt hour. By increment cost I mean the cost of production after elimination of fixed charges. Such cost would be composed of fuel, labor, and maintenance cost only. Thus the purchase of large blocks of TVA secondary power at 1.35 mills, with the old Nashville plant at a standstill during the high water months, should work tremendous savings in the plant of The Tennessee Electric Power Company.

The point I am here making is simply that the company's schedule of purchased energy is not set up on a realistic basis.

The power company, in estimating the manner in which it would use power for the Nashville area, made no attempt to take advantage of the maximum benefits that could be obtained under the contract. In other words, there is no showing of the savings which could be effected through the purchase of large blocks of secondary energy. So far as the company is concerned, it would seem that the clause providing the low rate for secondary power could have been omitted from the contract entirely. However, it is only common sense that this clause is of supreme importance to the purchaser of power. It is certain that its engineers analyzed every clause and every figure and the effect on the contract as a whole and upon the cost to it of energy, when the negotiations between the company and the Authority were under way. It is certain that a minute variation of a fraction of a mill in any block of the rate would mean that the power company, exercising its right and its discretion in the purchase of energy, and its use in the entire producing system of the company, would make changes in the technique it would employ in the purchase. If purchasing upon one rate, it would arrange for the dispatch of such quantities of current at such demand and load factors as would be most economical.

There are other considerations which should be given weight by this Commission and which constitute additional reasons for refusing authority to this company for the issuance of bonds to construct a steam plant at Bordeaux.

In the first place, there is the broad question of economic waste. The duplication of facilities in an area such as that of the Tennessee valley must be regarded as economic waste unless there exist adequate markets to absorb the current produced by such facilities. The United States government, as a by-product of its necessary program of flood control and development of navigation, has created generating facilities for large amounts of electricity. Clearly, much of this electricity has not yet been sold. In my opinion, The Tennessee Electric Power Company is not justified in expending $2,000,000 of the ratepayers' money to erect a plant which will duplicate these facilities already in existence in this area.

Another reason for refusing the application is the uncertainty of the future of the electric industry just at the present time. This is a moment of flux and change in the industry. The TVA itself has rendered the industry's future unpredictable. In Congress, there are bills for the creation of conservation authorities to be set up in all parts of the United States which will produce, as a by-product of the other necessary program of conservation, large amounts of hydroelectric energy. In Tennessee, three major cities have embarked upon a program of public ownership for electric distribution. If the program in these cities is successful in bringing more electric current to the consumers at lower rates, the experiments in these cities will be emulated by others, and possibly eventually by Nashville. Recognizing this fact, The Tennessee Electric Power Company sought and obtained, in the tentative contract for use in the negotiations, a clause stating that the contract for the amounts to be purchased would be reduced by so much electricity as the Authority might succeed in selling to any municipality in the area. This was a wise clause in the face of the economic development of the state at this time.

The construction of the steam plant and the issuance of $1,500,000 in bonds cannot be terminated in that manner. The steam plant will be a permanent investment. Accordingly, it is my opinion that common prudence should dictate that no such irrevocable investment as is called for by the construction of a steam plant should be allowed under present circumstances.

CONNECTICUT PUBLIC UTILITIES COMMISSION

Re Eastern Motor Freight Bureau, Incorporated

[Docket No. 6438.]

Discrimination, § 216 — Motor truck rates — Variations — Special conditions of loading or volume.

1. When reasonable and nondiscriminatory rates have been established upon a sound basis for motor freight transportation, no variation should be made for the purpose of accommodating rates to special conditions of loading or volume of movement; any such special rates must result in discrimination, p. 55.

Return, § 16 — Necessary profit — Motor carriers.

2. A motor truck operator, in order to continue to render motor freight transportation service, must receive as minimum compensation the cost of the service and in addition, to provide incentive for the rendering of such service, the revenue should yield some profit above the cost, p. 56.

Rates, § 425 — Motor trucking — Dissimilarity from railroads.

3. Operations of railroads and of motor carriers are altogether different, and the fundamental factors involved in railroad rate making do not apply to motor truck operations and if applied must bring about destruction of the motor truck transportation of common and contract carriers, p. 57.

Rates, § 426 — Motor trucking — Classification.

4. Rate classifications which have been designed for railroad use should not be adopted for motor truck transportation, because these two transportation industries have such marked differences in operating conditions, p. 57.

Rates, § 426 — Motor trucking — Classification — Commodity value.

5. The element of value of a shipment, although an important factor in the determination of rail classification, should not be used even as a partial measure to determine the classification for shipments by motor truck, p. 58.

Rates, § 426 — Motor trucking — Classification factors, weight, and volume.

6. Weight and volume are the only definitely determinable elements of commodities which affect the cost of motor truck transportation; other elements are not exactly determinable except by estimate or by experience, and the addition of one or more further elements results in a mere listing of articles which cannot be termed a classification under a fair definition of that term, p. 58.

Rates, § 426 — Motor trucking — Classifications — Risk of loss and damage.

7. Consideration of the risk of loss and damage of the shipment involves an element of cost of truck transportation which may be based upon opinion or upon experience, or both, and such consideration should properly be a function of rate making and not of classification, p. 58.

Rates, § 426 — Motor trucking — Factors involved.

8. Value and all elements other than weight and volume, in so far as they affect the cost of truck transportation, should be taken into account in the determination of general class rates and by making provision for percentage or supplementary charges on shipments in connection with which the need arises, such as those having especially high declared weight value; it is, then, reasonable to ignore such consideration entirely in making a classification, p. 58.

[June 4, 1937.]

PETITIONS *requesting establishment of uniform motor freight classification; Official Motor Freight Classification adopted with proviso.*

By the COMMISSION: On October 9, 1936, this Commission received a petition from the Eastern Motor Freight Bureau, Inc., requesting the Commission to establish and adopt a uniform motor freight classification, and on October 30, 1936, a petition was received from the Motor Truck Rate Bureau of Massachusetts, Inc., making a similar request; said petitions being, respectively, as follows: [Petitions omitted.]

Said petitions were assigned for a hearing to be held at the office of the Commission in Hartford on Monday, February 8, 1937.

On account of the importance of this matter, the regulatory Commissions of the other New England States were invited to be present at the hearing before this Commission, and Commissioner Leo F. Leary of the Department of Public Utilities, commonwealth of Massachusetts, and Commissioner Claude H. Swain of the Public Service Commission, state of New Hampshire, were present.

Notice of the time and place of hearing was given well in advance to the petitioners, interested parties in Connecticut, and the several motor truck associations in Connecticut as well as in other parts of the country, as fully appears from order of notice and return thereon on file. At said time and place interested parties attended and entered appearances as follows:

Eastern Motor Freight Bureau, Inc. (Official Motor Freight Classification), by Joseph Adelizzi, Manager; Motor Truck Rate Bureau of Mass., Inc. (Coordinated Motor Freight Classification), by Ralph H. Cahouet, General Counsel; American Trucking Associations, Inc. (National Motor Freight Classification), by C. F. Jackson, Agent; Official Classification Committee (Consolidated Freight Classification), by A. H. Greenly and O. F. Lovenberg; representing various Connecticut trucking companies and the National Motor Freight Classification, William Laube; Hartford Chamber of Commerce, Transportation Division, by John S. Mowbray; Manufacturers' Association of Connecticut, by N. W. Ford; Salter's Express and W. H. Minor, by C. L. Guest; Albert G. Benson, Waterbury, by Albert G. Benson; White Line Motor Express, Inc., Bridgeport, by Mrs. Mary

White; Motor Truck Association of Conn., by Myles W. Illingworth; E. J. Kelley Company, by J. Birney Tuttle; New York, New Haven & Hartford Railroad Company and New England Transportation Company, by W. J. Landon.

The hearing held on February 8, 1937, was adjourned and continued on February 9, 1937.

The petitions indicate a move by a substantial number of truck operators towards uniformity in motor freight classification within the New England States. However, the matter must of necessity be limited by this Commission to the consideration of the adoption of a uniform motor freight classification for use within the state of Connecticut.

Motor truck freight classifications were submitted in evidence by the several interested parties, as follows:

Official Motor Freight Classification by Eastern Motor Freight Bureau, Inc., representing approximately 250 common carriers.

Coordinated Motor Freight Classification by Motor Truck Rate Bureau of Massachusetts, Inc.

National Motor Freight Classification by American Trucking Associations, Inc.

Consolidated Freight Classification by A. H. Greenly, agent. This is the so-called rail classification.

The initial petition indicated that, from the standpoint of the trucking industry, uniformity and stability in motor truck rates is one of the most important objectives of motor truck regulatory laws and that uniformity in the classification of commodities is necessary before the rate objective can be reached, but the sponsor made clear at the hearing that the initial petition had nothing to do with rates.

The term classification means a systematic distribution, allocation or arrangement in a class or classes, according to a method or system, by bringing together in each class those articles which have common characteristics, thus making groups, in each class, of articles which resemble each other and separating into the other classes those that differ.

The expression "weight and volume" has been adopted by the Commission to designate the prime elements, in determining classification. This will avoid the misunderstanding which may arise either from the use of the word "density," meaning the ratio of mass to volume and commonly applied to an article having a uniform consistency throughout, or from the use of the expression "weight per cubic foot," since in many instances a theoretical and not the actual volume must be used in determining classification.

The evidence indicated that the Official Motor Freight Classification was developed, considering as prime elements, weight and volume, and value and susceptibility of the shipment to loss and damage, with primary consideration being given to the elements of weight and volume.

In determining weight and volume, the transportation unit was considered to be a truck of ten tons registered carrying capacity with one thousand cubic feet body carrying capacity.

The Cubic Density Survey of Commodities, 1935 (F.E.R.A. project S-F2–U27) was offered in evidence and its method of preparation is indi-

cated by the following quotation from the report:

"A painstaking effort has been made to base our standards upon the forms and sizes of containers in which the substance or article in question is commonly to be found under practical shipping and warehouse conditions. Whenever a commodity was found in more than one form of shipment, a complete survey was made of each form. The method of packing was noted, as was also the number of units to each package. In simple cases, such as those involving rectangular boxes or bales of uniform and standard size and weight, computation has been both direct and easy. The physical dimensions of each package or container-unit were taken as follows: outside dimensions of all square-shaped packages; maximum circumference of barrels, kegs, coil, etc., over any projections such as hoops or cleats. Dimensions were taken to the nearest quarter inch, which is as close as appears to be in general dependable for over-all measurements. The gross weight of each commodity packed, ready for shipment, was taken to the nearest quarter pound. The data herein offered should be found close for such instances as present no special difficulties."

The Official Motor Freight Classification provides for five primary classes by weight and volume, as follows:

First class: 3 pounds per cubic foot up to but not including 5 pounds per cubic foot.
Second class: 5 pounds per cubic foot up to but not including 10 pounds per cubic foot.
Third class: 10 pounds per cubic foot up to but not including 15 pounds per cubic foot.
Fourth class: 15 pounds per cubic foot up to but not including 20 pounds per cubic foot.
Fifth class: 20 pounds per cubic foot and over.

The basic rates which have been applied generally by motor truck operators, who have filed the Official Motor Freight Classification with this Commission, are as follows:

100% for fifth class
120% for fourth class
150% for third class
200% for second class
300% for first class

Sometime subsequent to the hearing an additional basic rate was filed, namely, 400 per cent for 4 times fifth class, to apply on weight and volume of less than 3 pounds per cubic foot which, in effect, establishes an additional class higher than first in the Official Motor Freight Classification.

From the evidence presented at the hearing it appeared that for each classification now in use a board or committee is provided to reclassify a commodity claimed to have been improperly classified, and also that consideration of the value of the shipment and the risk of loss and damage involves opinion of some such group of persons.

The committee, representing jointly the Eastern Motor Freight Bureau, Inc. and Motor Truck Rate Bureau of Massachusetts, Inc., which passes on classification matters, may change the classification of a commodity after consideration and by vote, making its determination solely on any one of the characteristics of such article, such as density, value, susceptibility to loss or damage, or any two or more of these characteristics.

The railroad classifications, known as the Official Rail Classification, the

Western Rail Classification and the Southern Rail Classification, have all been developed over a long period and have been so subject to changes in the classification of commodities that it is doubtful whether there is any determinable basis for their construction. These three rail classifications are now combined in one published volume, known as the Consolidated Freight Classification, and this also embodies the rail classification designated as the Illinois Classification.

Except for the Official Motor Freight Classification and the Coördinated Motor Freight Classification, other classifications in use by the motor trucking industry generally are an adaptation of one of the rail forms of classification. These several rail classifications differ materially from each other and to such extent that an article may be first class in one and fourth class in another.

The Official Motor Freight Classification has been filed with the Rhode Island Department of Taxation and Regulation and the Massachusetts Department of Public Utilities, as well as with the Connecticut Public Utilities Commission. The Public Utilities Commission of Maine has accepted still another classification which was prepared by the trucking industry. Of the other New England States, New Hampshire has not the authority to prescribe motor freight classification and Vermont has not yet exercised its authority to do so.

Through an understanding with the American Trucking Associations, Inc., the Official Motor Freight Classification has been confined to use within the New England States, and though it is not used for intrastate traffic in Maine it is used for interstate traffic to and from points in Maine.

Because the Official Motor Freight Classification has been designed for use by truck operators, in general there appears to be advantage for truck operators in its use as compared with the use of the classifications which are similar to the railroad classification and which are not altogether suitable for truck operators; though, for the purpose of avoiding confusion on interstate shipments moving between New England points and points in the Middle Atlantic States and beyond, the National Motor Freight Classification is used by truck operators who have adopted the Official Motor Freight Classification.

A representative of one operator testified that the motor truck operators using the National Motor Freight Classification or the Rail Classification generally handle about 90 per cent of the volume of their traffic on commodity rates, while one operator using the Official Motor Freight Classification handles only about 13 per cent of its traffic volume on commodity rates. There have been relatively few exceptions for basic or group commodities published for the Official Motor Freight Classification since its first issuance, while there have been many such exceptions published for the Rail Classification. In general, there appeared to be indications of the better adaptability of the Official Motor Freight Classification to truck operation.

The Official Motor Freight Classification is in use by a large number of common carriers operating within Connecticut. About five operators have filed with this Commission the

Consolidated Classification and about twelve have filed the National Motor Freight Classification.

The representative of the American Trucking Associations, Inc., did not oppose the Official Motor Freight Classification but stated he made appearance to furnish information as to the National Motor Freight Classification. He expressed the desire of his Association for a uniform motor freight classification, but urged that this Commission should not settle upon one classification now to the exclusion of others.

The National Motor Freight Classification follows the classification principles that have been used by rail and water carriers for many years, though it differs therefrom as to commodities not suited to truck transportation in the same class as for rail transportation. It is the same as the rail classification except for some modifications in ratings and descriptions. Its lack of consistency is indicated by testimony to the effect that certain commodities were raised from fourth class for the purpose of developing a minimum revenue. This substantiates the belief of the Commission that the rate is generally the underlying reason for change in classification of a commodity.

The rules underlying the National Motor Freight Classification are those of the rail classification modified to a certain extent for the purpose of adapting them to the trucking industry. This classification was developed primarily for use in connection with interstate traffic and filed with but few state Commissions at the start, though it is now filed with the Interstate Commerce Commission and reported to be on file with 28 state Commissions, including all the New England States except Vermont and Rhode Island.

Changes in this classification are made by members of the staff of the American Trucking Associations, Inc., after public hearings in each matter, presided oved by the National Trucking Board, when shippers and interested parties may be represented. Decision of this board is submitted to the several bureaus, to the trucking industry representatives, and to other interested parties, for comment, before issuance, and objections raised may result in modification of the decision as finally issued.

This classification provides for less than truck load ratings and also for volume ratings.

[1] When reasonable and nondiscriminatory rates have been established upon a sound basis for motor freight transportation, it does not appear that there can then be any justification to make any variation therefrom for the purpose of accommodating such rates to special conditions of loading or volume of movement; on the contrary, from the present viewpoint, it appears that any such special rates must result in discrimination.

For the National Motor Freight Classification the principal factor of classification was testified to be density, or weight per cubic foot, and the other factors to be value per pound, fragility, possible damage to other shipments, and, to some extent, the character of the traffic, the conditions under which it moves and the ability of a commodity to stand the rating, as well as the feature of competition with other carriers.

It was definitely indicated that for

this classification assignment to classes is made in order that rate purposes may be followed in a simple way.

The Consolidated Freight Classification is used by the rail carriers and has been adopted in seven states for all motor carriers therein. The chairman of the group which manages this classification, designated the Official Classification Committee, appeared in opposition to fixing upon any classification as uniform on account of his claim of unsettled conditions in the motor carrier industry at present, though he considered the tendency to uniformity as desirable. Weight density is the most important element in determining this classification, but no definite evidence was offered to indicate how density was used in determining this classification, and it was claimed that "what the traffic will bear" is not now an element. It was admitted that competition between similar commodities is a factor in determining this classification, as well as value and susceptibility to damage. This classification is used by only two motor carriers in Connecticut.

Although the matter of rates is not before the Commission in this proceeding, they have such a direct bearing upon the use of a freight classification of commodities that it is not only desirable but essential to discuss them in a general way.

Transportation does not increase the value of a commodity but does add to the cost so there is an ever present economic reason for reducing the extent of transportation as well as the expense therefor to a minimum. In motor trucking there is and always will be a partial control against unduly high rates through potential private carrier transportation.

The main purpose of regulation of motor truck operation is to effect control of safety upon the highways and from this premise the principle of sound and compensatory rates is essential.

[2] If a motor truck operator is to continue to render motor freight transportation service, he must receive as minimum compensation the cost of the service and in addition to provide incentive for the rendering of such service the revenue should yield some profit above the cost. Under regulation and for the stability of the industry this fundamental rule must apply to every feature of motor freight operation.

It is commonly known that in the development of the trucking industry, up to the adoption of regulation and possibly beyond that and in some cases up to the present time, the trucking industry, in charging for its transportation, has ignored the cost of service and has made its existence depend upon obtaining freight in volume with consideration only to its total revenue. At the outset it established rates upon a basis competitive with the railroad and then, to secure loading in both directions, accepted freight for one direction at low rates without consideration as to whether the traffic bore its share of the cost of the service. This led to further rate determination upon an arbitrary basis. The conjunction with the lack of consideration of cost of the service and adequate compensation therefor it adopted the rail classification or modifications thereof as the fundamental of motor freight rate making.

The trucking industry should abandon its irregular practices adopted before it was under regulation, and its practices prior to regulation should not be frozen.

A Commission must not be expected to legalize practices of the trucking industry which, under regulation, are now illegal.

[3, 4] From the foregoing it is evident that the trucking industry has quite generally adopted as the foundation of its rate making the practices of the railroads. The operations of these two types of carriers are altogether different. The railroad has a relatively large permanent investment in real property and in rolling stock for the transportation of passengers as well as freight.

The railroad's expenses may be divided into three general parts:

1. Fixed charges on road and equipment indebtedness.

2. Operating expenses which vary little, if at all, with the volume of traffic.

3. Variable operating expenses, including the cost of train operation.

There will be very little variation in the first two of these in proportion to the volume of traffic, while the last is almost directly variable with the volume of traffic. So it is apparent that if the revenues of a railroad from both passenger and freight service are sufficient to provide for the first two items then the last item may be used as the sole factor in determination of particular rates, that is, when a railroad has rolling stock available and all of its fixed expenses as outlined above have been paid, it may be profitable for it to obtain any traffic which will yield a revenue greater than the added cost of handling it. This is exemplified in excursion rates made by the railroads in their passenger transportation.

Truck transportation expenses may likewise be divided into three general parts:

1. Fixed charges on investment in motor vehicles and real property.

2. Operating expenses which apply to each truck unit and vary little with the extent of their operation.

3. Operating expenses which vary with the extent of operation.

By contrast with the railroads the first of these items is relatively small, since it applies to a relatively small investment in motor vehicles and little or no investment in real property.

The second and third items represent the major part of the cost of truck transportation. Taken together, these vary directly with the volume of traffic. Therefore, the added cost of handling additional traffic by truck is substantially equal to the average or unit cost of handling, and the charge for performing an added service must not be less than the unit cost of that service.

In Docket No. 6395 [20 P.U.R. (N.S.) —] determining rates for the transportation of bituminous coal, the Commission has indicated, in detail, how this analysis of truck transportation costs may be applied to a concrete case. It was there shown that the total cost outlays of a firm engaged in the transportation of bituminous coal would depend almost exclusively upon the number of trucks owned and maintained, and the mileage operated; clearly both of these elements would vary directly with the general volume of traffic handled.

It is quite obvious, therefore, that the fundamentals outlined above with respect to railroad revenues do not apply to motor truck operation and, if applied, must bring about destruction of the motor truck transportation of common and contract carriers.

Classification which has been designed for railroad use should not be adopted for motor truck transportation because these two transportation industries have such marked differences in operating conditions.

Rail classifications have been in use for a long time and while it is claimed that they are primarily based upon density, that is, the weight and volume of commodities, it is known that the rail classification is influenced by many other additional elements namely: value per pound or other unit packed for shipment, bulk, loading possibilities, both as to weight per car and ability to stow, volume of tonnage, risk, liability to damage, care in handling, competition, whether less than carload shipments may be safely loaded with other articles in car, whether articles can be loaded on open cars, public benefit, whether article is crude, rough or finished, liquid or dry, knocked down or set up, loose or in bulk, nested or in boxes, or otherwise packed, relative value and stage of manufacture.

It is evident that several of these elements, other than weight and volume, do not require consideration in connection with truck transportation, and some of them do not affect the cost thereof.

[5–8] While the element of value of a shipment has undoubtedly been an important factor in the determination of rail classification, the Commission believes that the value of a commodity should not be used even as a partial measure to determine the classification for shipments by motor truck. If value is so used in order to bring in the element of "what the traffic will bear," then the classification is made to depend upon an element which has no relation whatever to the cost of truck transportation and should not enter into classification.

It is argued, however, that value and certain other elements should be considered because they affect the cost of truck transportation by increasing the trucker's liability in case of loss and damage. But, it appears reasonable to eliminate value in determining classification; first: because if it is applied as an exact element it must then be considered in classifying every commodity and it is more than likely that this would not be acceptable to the trucking industry since it has evidently avoided so doing, except in a relatively small number of commodities; second: because from a practical standpoint all elements except weight and volume are such that they must be determined on the basis of judgment, or experience, or arbitrarily.

Weight and volume are the only definitely determinable elements of commodities which affect the cost of truck transportation. All other elements are generally not exactly determinable except by estimate or by experience and they do not affect the cost of truck transportation but do affect the cost of performing truck transportation service.

It must be concluded, therefore, that the addition of one or more further elements results in a mere

listing of articles, which cannot be termed a classification under a fair definition of that term.

Consideration of the risk of loss and damage of the shipment involves an element of cost of truck transportation which may be based upon opinion or upon experience, or both, and such consideration should properly be a function of rate making and not of classification, for if it were a function of classification it would not be in accord with the principle of making a classification as defined herein.

Value and all elements other than weight and volume, in so far as they affect the cost of truck transportation, should be taken into account in the determination of general class rates and by making provision for percentage or supplementary charges on shipments in connection with which the need arises, such as those having especially high declared weight value. It is then reasonable to ignore such consideration entirely in making a classification.

It is argued by some that a classification cannot be made upon the consideration of weight and volume alone, but this point of view is invariably influenced by the fact that the use of only these two elements places the commodity in a class which carries an improper rate. So it is that the use of any element in addition to weight and volume always arises from the consideration of the rate which, if adopted, must result in confusion and a chaotic grouping.

It cannot be claimed that the railroad classifications have fully served the purpose for which they were created, for in addition to numerous changes of classification made upon appeals therefor, there have been many complete departures from the application of the classification in the establishment of a commodity rate (a specific rate to apply to a certain commodity between certain points) and by an exception (an adjustment of a class rate within a limited area).

The Commission considers, therefore, that weight and volume are the only definitely determinable elements of commodities shipped by motor truck which it appears to be necessary to consider in determining how much the truck will carry. The weight characteristic limits the quantity of a commodity shipped in one truck load which, if the article is heavy, will be relatively small and may be smaller than the truck volume capacity. The other characteristic, volume, limits the quantity of a commodity shipped in one truck load which, if the article is light, will be relatively large and may be less than the truck weight capacity. The volume is generally determined as that of the article or container in which it is packed, but the theoretical loading volume obviously may be greater than this if the article or container is of such shape as to restrict the number of pieces which can be loaded upon a truck.

As the several rail classifications differ materially from each other, uniformity cannot be claimed as a reason to sustain their use for motor transportation. It appeared that, from the standpoint of the shipper, there would be no practical obstacle in the use of a motor truck classification entirely different from the rail classification.

The Commission believes that with the several motor freight classifica-

tions in use today it would be a hardship upon many operators in the motor truck industry if the Commission at this time should prescribe or require the immediate adoption of any one motor freight classification to the exclusion of all others, but having in mind the desirability of prescribing, in the near future, a uniform motor freight classification, the Commission believes that the motor truck operators should, as soon as practicable, adopt a uniform motor freight classification based solely upon weight and volume characteristics of commodities, leaving all other considerations to be treated in determining rates.

In the opinion of the Commission upon the final establishment of a uniform classification there should be no departure from the weight and volume method, such other elements which may require consideration and other characteristics affecting the cost of truck transportation service should be provided for by applying a percentage to the class rate or by supplemental charges; there should be no commodity rates and there should be no exceptions.

Under this arrangement it may be possible for the trucking industry to simplify all of its rate making by fixing a stated weight value as the maximum liability of the carrier for all classes of motor freight and determining each class rate upon the basis of this stated weight value, and then providing a supplemental schedule of additional charges by the carrier for higher weight value when specifically declared by the shipper.

ORDER

Since the Official Motor Freight Classification appears to be based primarily upon the considerations of weight and volume, the Commission adopts this classification with the proviso that it will, from time to time, and as soon as practicable, be modified to conform strictly and solely to the weight and volume characteristics of commodities and that it shall be completely so revised not later than January 1, 1938.

The Commission further orders and directs that each new classification, as may hereafter be filed by any operator to apply to the commodities he is authorized to transport, shall conform strictly and solely to the elements of weight and volume characteristics of such commodities.

The other classifications which have been filed with the Commission may remain in use until January 1, 1938, but with the proviso that data supplemental to each such classification shall be filed with the Commission on or before October 1, 1937, which will inform the Commission as to the difference between such classification and the Official Motor Freight Classification, and thus permit a ready comparison of rates.

We hereby direct that notice of the foregoing be given by the secretary of this Commission by forwarding true and correct copies thereof to parties in interest, and due return make.

Re Durham Telephone Company

Intercorporate relations, § 15 — Approval of contract — Solicitation of advertisements and printing of telephone directories.

A contract between a telephone company and an affiliated company providing for the solicitation of advertisements and printing of telephone directories should be approved nunc pro tunc when it appears that the contract was entered into in good faith, without realizing that statutory provisions relating to contracts between affiliates were applicable, and that the contract is fair and reasonable and advantageous to the telephone company.

[July 23, 1937.]

APPLICATION *for approval of contract with telephone directory and advertising company for solicitation of advertisements and printing of telephone directories; granted.*

WINBORNE, Commissioner: This cause comes on to be heard before Stanley Winborne, Utilities Commissioner of the state of North Carolina, on Friday, the 23rd day of July, 1937, upon the petition of Durham Telephone Company for approval nunc pro tunc as of date of March 24, 1934, of a contract in writing entered into with Telephone Directory and Advertising Company under date of March 24, 1934.

The petition in this cause is made and filed pursuant to the requirements of § 1112 (17) of the Consolidated Statutes of North Carolina, and contains as Exhibit A a true copy of a contract that was made and entered into with Telephone Directory and Advertising Company, a corporation, under date of March 24, 1934.

The contract for which approval of the Commissioner is sought provides for the solicitation of advertisements and the printing of telephone directories for Durham Telephone Company by Telephone Directory and Advertising Company after the termination in June, 1936, of a contract formerly existing between Durham Telephone Company and L. M. Berry and Company, and to continue for a period of three years from and after said operative date, and thereafter from year to year, subject to the right of cancellation by either party upon twelve months' written notice to the other party.

From the petition, treated as an affidavit, and the statements and representations of officers and agents of the company, it appears that Telephone Directory and Advertising Company is a corporation, the common stock of which is owned by Telephone Bond and Share Company, which latter company (Telephone Bond and Share Company) is also an

owner of common stock of Durham Telephone Company, and that, therefore, Telephone Directory and Advertising Company and Durham Telephone Company are affiliates within the meaning of said term as used in Chap. 21 of the Consolidated Statutes of North Carolina, and more particularly § 1112 (17); and it further appears that Durham Telephone Company entered into said contract as of said date of March 24, 1934, in good faith, without realizing that the provisions of § 1112 (17) were applicable to said contract, and that the same would have to be approved by the Utilities Commissioner of the state of North Carolina before the same could become effective; and it appears further that Durham Telephone Company has not intended to ignore the provisions of said statute or to in anywise act arbitrarily in the conduct of its business, but that it simply overlooked the provisions of said statute and its application to said contract, and now prays for an order nunc pro tunc as of date of March 24, 1934, to be entered in this cause approving said contract.

From the petition, treated as an affidavit, and the statements and representations of officers and agents of the company, it appears that Durham Telephone Company has issued two directories under the provisions of said contract, the first as of date of December 1, 1936, and the second as of date of June 1, 1937, and has received as its share of the proceeds from the same the sum of $878.25, which represents net profit; and it further appears that said contract is advantageous to Durham Telephone Company and that it will be for the best interest of the petitioner for said contract to be approved.

Upon consideration of the whole matter, the undersigned Commissioner is of the opinion and finds:

(a) That the contract entered into between Durham Telephone Company and Telephone Directory and Advertising Company is a fair and reasonable contract and advantageous to Durham Telephone Company in the publication of its telephone directories.

(b) That Durham Telephone Company entered into said contract as of date of March 24, 1934, in good faith, without realizing that the provisions of § 1112 (17) were applicable to said contract and that said contract would have to be submitted to and approved by the Utilities Commissioner of the state of North Carolina before the same could be effective, and that, therefore, the same should be approved by an order entered nunc pro tunc as of date of March 24, 1934.

It is, therefore, now, *ordered* that the contract entered into by and between Durham Telephone Company and Telephone Directory and Advertising Company, a corporation, under date of March 24, 1934, a true copy of which is attached to the petition filed in this cause and marked "Exhibit A," be, and the same hereby is, in all respects approved, and for the purpose of establishing the effective date of said approval as the date of the execution of said contract on March 24, 1934, this order is entered nunc pro tunc as of date of March 24, 1934, and the publication of di-

rectories as of date of December 1, 1936, and of June 1, 1937, by Durham Telephone Company under the provisions of said contract are considered as having been done under the terms of a contract approved by the Utilities Commissioner of the state of North Carolina, as provided by law.

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Re John R. Miller

[Application Docket No. 34912.]

Eminent domain, § 8 — Damage award — Interest allowance.

1. No interest allowance should be added to a damage award for property taken, injured, or destroyed by reason of the construction of a railroad bridge for the period between the time when the property was first taken, injured, or destroyed and the time when determination of damages sustained has been made by the Commission, since prior to such determination the landowner is owed no debt but has merely a claim for unliquidated damages, p. 63.

Eminent domain, § 8 — Damage award — Interest allowance.

2. No interest allowance should be added to a damage award for property taken, injured, or destroyed by reason of the construction of a railroad bridge for the period beginning at the time of determination by the Commission of damages sustained and ending at the time of payment; it is assumed in all crossing elimination projects that payment of such awards will be made with reasonable promptness, p. 63.

[July 19, 1937.]

APPLICATION *for modification of damage award for property taken, injured, or destroyed by reason of the construction of a railroad bridge and the approaches thereof, so as to make allowance for interest; petition denied.*

By the COMMISSION: This matter comes before us upon the petition of Frank R. Smith, executor of John R. Miller, deceased, for modification of a damage award for property taken, injured, or destroyed, described in the report and order of the Public Service Commission dated March 2, 1937.

[1, 2] The prayer of the petition is that interest on the said damage award be allowed from the time when the property of John R. Miller was first taken, injured, or destroyed,

namely, November 26, 1935, to the date of the petition, namely, May 1, 1937.

Although there is no precedent governing the precise facts of this case, the opinion of our supreme court in Wayne v. Pennsylvania R. Co. (1911) 231 Pa. 512, 80 Atl. 1097, dictates, in part, our conclusions herein. In the Wayne Case it was held that a right to interest on the amount of damages sustained does not arise simultaneously with the condemnation of land in an eminent domain proceeding. The court reasoned that, after condemnation, and before due determination of damages suffered in such proceeding, the landowner was owed no debt, but had merely a claim for unliquidated damages. Since interest is an incident of debt, and not of unliquidated damages, no question of interest presents itself until after due determination of the damages.

Applying that reasoning to this case, it is clear that since due determination of the damages sustained here was not made until the Public Service Commission report and order of March 2, 1937, no debt before such time was owing by the Allegheny County Authority, by whom the damage award here is payable. Consequently, an award of interest for any period prior to March 2, 1937, would be improper.

Further, there is no basis for awarding interest to the petitioner for the period from March 2, 1937, to May 1, 1937. It is assumed in all crossing elimination projects that where payments are required to be made by some party as compensation for damages to property such payments will be made with reasonable promptness, and consequently neither this Commission nor the Public Service Commission has ever made provision for interest on the sums due. Any delay in payment by the Allegheny County Authority is a natural consequence of petitioner's action in seeking the modification here prayed for, and was not in any manner provoked by Allegheny County Authority; therefore,

Now, to wit, July 19, 1937, it is *ordered* that the petition be and is hereby refused.

Industrial Progress

Frigidaire Enters Electric Range Field

FRIGIDAIRE Division, General Motors Corporation, has entered into production of a line of newly developed electric ranges to be marketed nationally as an auxiliary to its electric refrigerators. Beginning of manufacture of ranges, national introduction of which will occur later this year, marks the beginning of an expansion program of General Motors into the home appliance field.

National Acme Issues New Chronolog Booklet

A NEW booklet describing three new models of Chronologs, production control instruments, has just been published by The National Acme Company, 168 East 131 Street, Cleveland, Ohio.

This booklet gives complete information on the use and operation of the Chronolog, claimed by the manufacturer to be the only instrument that keeps a running record of time and a count of pieces on the job—and prints this information on a chart that may be read as easily as a typewritten report.

A new line of super-sensitive line voltage switches and Namco Solenoids are described in the same booklet. Copies may be obtained on request.

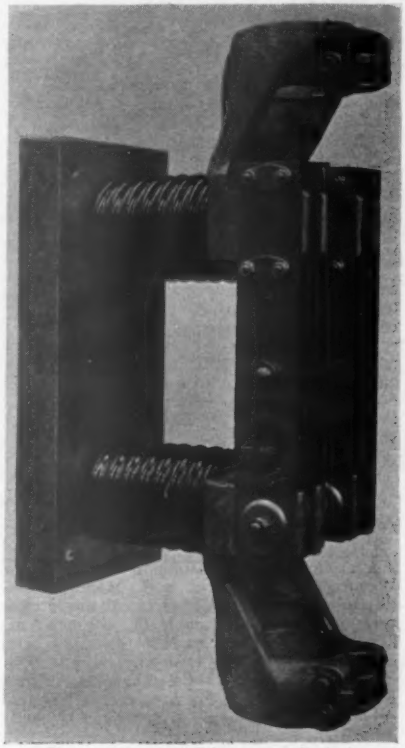
$19,590,000 to be Spent by Central New York Power

THE Central New York Power Corporation, a subsidiary of the Niagara Hudson Power Corporation, expects to spend about $19,590,000 on new construction before the end of 1939, according to A. W. Andrews, Chief Engineer of the Company. Mr. Andrews said $16,529,000 would be expended for expansion of electric facilities, $1,800,000 for improvement of gas facilities and $1,300,000 for general construction.

The chief item of construction, according to Mr. Andrews, is the erection of a steam plant at Oswego, N. Y., estimated to cost $9,070,000. In addition, $1,000,000 will be spent for rural electric distribution lines and about $250,000 for two hydro-electric generators at the Oswego dam.

Delta-Star Announces Improved Disconnecting Switch

DELTA-STAR Electric Company, Chicago, Illinois, announce an improved high-ampere capacity disconnecting switch. This single-pole unit of a three-pole switch has tongue type silvered contacts engaged by double full floating blades. The terminals



Group-Operated Disconnect Switch

integral with the switch contacts are of the clamp type for connecting 4" I.P.S. copper tubing.

The wet process porcelain insulators have metal inserts to which the switch parts are bolted. All bolts, nuts and washers on the live parts are nonferrous.

The Marchant Calculator

A NEW booklet of operating instructions for The Marchant automatic "silent speed" calculator has been issued by Marchant Calculating Machine Company, Oakland, California.

The simple operating instructions outlined in the new manual will enable the inexperienced operator to master thoroughly all the essen-

tials of operation and application involving addition, subtraction, multiplication and division, and their various combinations, with a few minutes of practice, according to the manufacturer.

Copies of the instructions booklet and descriptive folder of the new Marchant all-electric calculator may be obtained from the manufacturer.

Burroughs Adding Machine Co. Issues New Folder

How cashiers of public utilities and other businesses can obtain protection that saves money, and information that makes money, is shown in a colorful new folder issued by Burroughs Adding Machine Company, Detroit, Michigan. Copies are available upon request.

This folder describes and illustrates latest developments in Burroughs cash registering machines and contains valuable information that will aid in selecting cash registering equipment best suited to individual needs.

Among the models featured are printing cash registers with locked-in autographic detail tape; non-printing cash registers in various capacities and colors; combination cash registers that provide itemized receipts, retain a duplicate record, and can be used as adding machines; bill receipting machines for fast certification and maximum cash protection; and many other styles to meet a wide variety of requirements.

Westinghouse Making Giant Turbine Rotor

A ROTOR for a steam turbine, being "bladed" at the South Philadelphia Works of the Westinghouse Electric and Manufacturing Company, is machined from a single steel forging, and when completed will make the heaviest single piece turbine rotor yet made by the Westinghouse Company.

Manufactured for the Quindaro Power Plant, Kansas City, Kansas, the turbine will drive an electric generator delivering 30,000 kilowatts—enough electric current to light simultaneously 1,200,000—25-watt electric lamps. The rotor, when ready for "blading," weighed about 100,000 pounds.

Fulscope Micromax Controller Offered by Taylor

For those process control problems where smooth, proportional valve action is imperative and the potentiometer principle of temperature measurement is preferred, the Taylor Instrument Companies, Rochester, New York, now offer the Fulscope Micromax Air-operated Potentiometer Controller.

It utilizes the same completely adjustable, air-operated control mechanism that is used in the thousands of Fulscope temperature, pressure, rate of flow, and liquid level controllers now in service.

The temperature measuring system is the well known Micromax recording and indicating potentiometer. This is the only potentiometer in which all functions affecting accuracy of temperature measurement are fully automatic—automatic reference-junction compensation; automatic, positive balancing of the potentiometer circuit; and automatic current standardization.

The principal parts of both mechanisms are interchangeable with the many Fulscope and Micromax instruments now in service. This permits small stocks of replacement parts, lower maintenance costs, and better service.

The Fulscope Control Unit operates in conjunction with the Taylor Motosteel Diaphragm Valve. Where precision valve action, or both precision valve action and compensation for changes in load, may be necessary to prevent deviation from the control point, the Fulscope control mechanism can be supplemented with the Taylor Valv-Precisor or Dubl-Response Control Unit, respectively. Thus, control equipment which most economically solves the individual control problem may be selected.

$30,000 Project Planned by Lexington Utilities

The Lexington Utilities Company is planning to double the size of its transformer substation at South Limestone and Rose Sts., at an approximate cost of $30,000, according to a recent announcement. The increase became necessary because of the new buildings now under construction and planned at the University of Kentucky and because of increased building in suburban areas.

Neal Higgins Placed in Charge of International Industrial Sales

The continued expansion of International Harvester's industrial tractor and power unit business has necessitated a realignment in its sales department personnel. As a result, Neal Higgins has been placed in charge of all industrial tractor and power unit sales through branches, dealers, and manufacturers, while R. C. Flodin, heretofore in charge of the division, has been assigned new responsibilities.

Mr. Higgins has been closely identified with the sale of the Company's industrial power lines for the past five years. He was for three years traveling industrial sales representative on the Southern District before being called to the Chicago office early last year to promote tractor and power equipment sales through dealers in the entire country. Long familiarity with dealer problems, extensive observation of power users' requirements throughout the country, and a broad knowledge of engineering and manufacturing procedure well qualify him to direct the work of this division. He will also, as formerly, devote his attention to the promotion of sales through dealers.

To Mr. Flodin falls the task of coördinating the work of the engineering, manufacturing,

ELECTRUNITE

BOILER *CONDENSER*

TUBES

Millions of feet of ELECTRUNITE Tubing have been installed in all types of boilers and heat transfer equipment. They are used in high and low pressure, fire tube and water tube boilers of both straight and bent tube types by leading railroads, central power stations, boiler manufacturers, ship owners and general industrials. Round, uniform in wall thickness and diameter, full normalized in controlled atmosphere furnace with a smooth scale-free surface and a weld as strong as the wall, they are accepted by the A. S. M. E. Boiler Code; U. S. Department of Commerce, Steamboat Inspection Service; American Bureau of Shipping; Lloyd's Register of Shipping. Made of open-hearth steel, copper-bearing steel or rust-resisting Toncan Copper Molybdenum Iron in a complete range of sizes and gauges. . . . Write for complete, detailed information.

REPUBLIC STEEL

Steel and Tubes, *Inc.*

WORLD'S LARGEST PRODUCER OF ELECTRICALLY WELDED TUBING

CLEVELAND . . . . OHIO

In writing Republic Steel Corporation (or Steel and Tubes, Inc.) for further information, please address Department PF.

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and sales departments as applied to the industrial and agricultural power lines, a new post created by the necessity of meeting the ever-growing demand for modified units and the development of special equipment to fit the changing requirements of power users in many fields.

W. M. Parrish will continue to work with the numerous manufacturers of allied equipment in the development of new applications of International power and its adaptation to changes and improvements in the design of current models.

Buffalo Niagara Electric Corp. Plans $8,000,000 Steam Plant

A NEW $8,000,000 steam generating plant is to be constructed by the Buffalo Niagara Electric Corporation to take care of the rising demand for energy in that area, according to Col. William Kelly, president.

The new plant will house a single unit of 80,000 kw. and will be constructed in Buffalo Harbor, near Fuhrman Boulevard. It will have a rating of 1,200 lb. and 900 deg. F.

Construction on the new plant will begin in the near future and it is expected that it will be completed for operation by 1940.

While need for the additional capacity to the company's system is not immediate, it is anticipated that the completion of the new $12,500,000 plant of Chevrolet Motor Company and other industrial expansion projects in the Buffalo area will make it necessary to have added generating capacity in the future. The new plant will also relieve part of the load of the Huntley steam plant.

Victor Insulators, Inc. Reports Rapid Growth

OPERATING one of the largest insulator plants in this country, Victor Insulators, Inc., has reported a rapid growth since it organized in April, 1935. This company, composed of men who have many years' experience in the manufacture of high voltage insulators, started with 20 men on the factory payroll. Over 250 men are now employed and the company has had their products accepted by the most important users of high voltage porcelain in the equipment manufacturing field and by utilities.

During the last year they have furnished insulators for many important high voltage lines from 66 K.V. to 220 K.V. including the switch insulators for Bonneville Dam station. Practically all of these insulators, both line and switch units, have been furnished under specifications considered as the most rigid ever written.

Victor is the home of the wet process porcelain insulator and Victor Insulators, Inc., are now manufacturing a complete line of insulators for all voltage ratings. Also, they are making many specialties for transformer and switch manufacturers including many cast porcelains, such as fuse cut boxes and transformer gooseneck bushings.

Westinghouse to Build New Plant

THE Westinghouse Electric and Manufacturing Company is planning to build a new service plant and warehouse in South Boston at an estimated cost of $400,000, according to a recent announcement. It is expected that the new plant will be completed next Spring.

Improved Electric Tool

A NEW type of tool retainer has been developed by the Wodack Electric Tool Corporation, 4627 West Huron St., Chicago, manufacturer of the "Do-All" combir ation electric hammer and drill.

The retainer is made entirely of molded rubber, fits over the nose of the hammer, and holds the cutting tool in place with just the right amount of play for rapid drilling or cutting. It also keeps grit from getting into the socket in overhead drilling.

The new retainer is now standard equipment on Wodack electric hammers at no increase in the price of the tool.

Continuing Property Records for Public Utilities

A SIMPLE and economical method of maintaining a balanced perpetual inventory of fixed capital for electric, gas, water and steam companies has been published under the title, "Continuing Property Records," by the Burroughs Adding Machine Company.

The importance of employing a fast and accurate method of determining the value of property that is to be retired has increased greatly since the new classification of accounts was issued for utilities by the Federal Power Commission, effective the first of this year. Under the new classification, the number and amount of "maintenance" items will decrease and the number and amount of "additions and retirements" of property will increase, with a corresponding increase in the volume of accounting work.

Also in several states, it is pointed out, the regulatory bodies have made the keeping of some form of perpetual inventory record mandatory.

The system briefly described in this booklet was adopted by a utility having a plant and property valuation of approximately 20 million dollars, 40,000 gas and electric meters, and operating in 42 tax districts. The system provides a balanced and controlled record, showing current totals of plant and property by accounts and tax districts. It provides a fast method of obtaining statistics to meet the requirements of operating officials, regulatory commissions, tax commissions, trustees and insurance. Peak loads, common at the end of fiscal and calendar years, are eliminated by building up statistics each month.

Copies of this publication may be obtained from The Burroughs Adding Machine Company, Detroit, Michigan.

Buckeye DITCHERS

l 11 digs trench 11½" wide, depths to 5½'.

l 12 digs trench 14½" wide, depths to 5½'.

for
FAST...
ACCURATE.. *Low-cost ditching*

ORIGINATORS *of the* WHEEL-TYPE DITCHER

Put a Buckeye Ditcher on the job and you know that the trench will be completed on schedule and at minimum cost. No soil condition short of rock is too difficult and you have available the power and the choice of digging speeds that make remarkable savings in time. When you buy a Buckeye you are getting a machine into which has gone all the engineering skill and experience that comes from well over a third of a century of building trench excavating machines, in use wherever pipelines are laid, the world around.

BUCKEYE TRAILER

ase in transporting Buckeye Ditch- nvestigate the advantages of these d, easily loaded trailers—built in and 15 ton capacities.

HE BUCKEYE TRACTION DITCHER CO., FINDLAY, OHIO

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Business as usual— all summer long...

That's Air Conditionin

—an adventure in human comfort that has become the retailer's most effective summer salesman!

Because of its very newness—air conditioning, and particularly that part of air conditioning known as summer cooling, has suffered from a vast number of conflicting claims.

Summer Air Conditioning, as "Products of General Motors" provide it, is a business investment—which can be made on a business basis.

For homes and offices—where the problem is to cool a single room—there is the Frigidaire Electric Room Cooler.

There are more Frigidaire Electric Room Coolers in use today than all other makes.

And for stores and hotels and business establishments of all kinds—where the problem is less simple and each job has its own individual requirements—there is Frigidaire **Controlled-Cost** Air Conditioning.

What is **Controlled-Cost** Air Conditioning?

In brief, it is a means of fitting cooling eq ment exactly to the size and special need any business or home—and of supplying knowledge and **control of all costs** f **first to last.**

You get the kind of air conditioning business needs.

You get the amount of cooling any busi needs.

And you get a method of installation fits any building . . . whether old or new owned or leased.

Frigidaire Controlled-Cost Conditioning grew out of General Mo vast experience in electrical refrigeration- basis of modern, summer cooling.

The same leadership in ideas and in neering which developed Freon (the mo refrigerant) and the Finned Cooling Co behind **Controlled-Cost** Air Conditi and its money-saving advantages.

Get the facts about Delco-Frigidaire e ment for automatic cooling, heating and ditioning of air.

It Pays to Talk to

DELCO-FRIGIDAIR

The Air Conditioning Division of General Motors

AUTOMATIC HEATING, COOLING AND CONDITIONING OF

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PENNSYLVANIA TRANSFORMERS

PENNSYLVANIA *Rural Line* TRANSFORMERS

THIS important addition to the Pennsylvania line offers the same assurance of dependability and long life that has characterized every Pennsylvania transformer ever built, and embodies these traditional Pennsylvania advantages:

CIRCULAR COILS . . . which withstand severest short-circuits without injury or distortion.

REINFORCED INSULATION . . . which protects against high voltage surges of steep wave-fronts.

DETACHABLE BUSHINGS . . . which are bolted externally and permit replacement without cover removal.

ROUND STEEL TANKS . . . made of rust-resisting copper-bearing steel; strong and sturdy.

Pennsylvania Transformer Co.
1701 Island Avenue, N. S., Pittsburgh, Pa.

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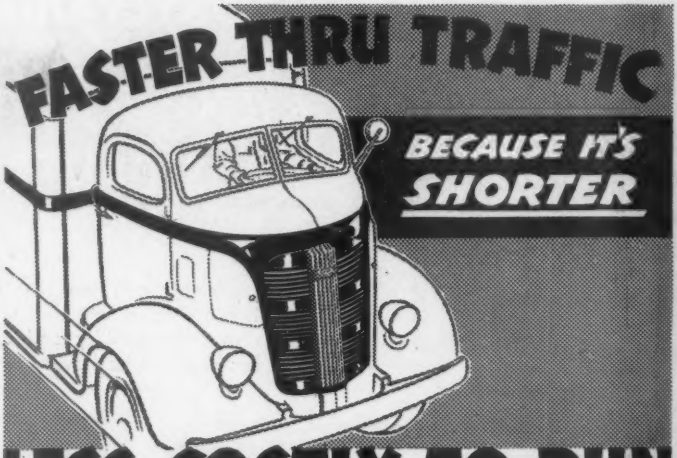

LESS COSTLY TO RUN

BECAUSE IT SAVES TIME!

Saving time saves money. To drive a new cab-over-engine GMC is to experience an entirely new *traffic ability* not found in other trucks. Sharper turning, over-car-tops vision and shorter over-all length facilitate quicker traffic travel. Try it!

QUALITY AT PRICES LOWER THAN AVERAGE

THE TRUCK GMC OF VALUE

Time payments through our own Y. M. A. C. Plan at lowest available rates

GENERAL MOTORS TRUCKS & TRAILERS

GENERAL MOTORS TRUCK & COACH
DIVISION OF
YELLOW TRUCK & COACH MANUFACTURING COMPANY, PONTIAC, MICH.

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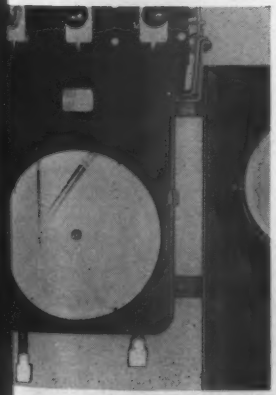
HARNESSING PRESSURES 8 MILES AWAY *lowers pumping costs*

BRISTOL'S METAMETER FOR GAS PRESSURE
ONE TRANSMITTER ONE RECEIVER
EASURING AND TRANSMITTING
AS PRESSURE HERE
PRESSURE READINGS RECORDED HERE
CAN BE ANY DISTANCE APART
TWO-WIRE TRANSMISSION LINE (TELEPHONE CIRCUITS MAY BE USED)
POWER SUPPLY
TAMETER TRANSMITTER AT
T OF LINE, OUTLET OF GOVERNOR
OTHER REMOTE POINT IN THE
TRIBUTION SYSTEM.
RECORDING METAMETER RECEIVER
AT PUMPING STATION OR IN
DOWNTOWN OFFICE



Another Metameter installation offering you a money-saving suggestion

For checking line pressure and holding it within proper limits, one company has installed the Transmitter of a Bristol's Metameter on a street pole, as shown, at a suitable point in the line. The Recording Receiver is located in the pumping station, eight miles away.

As a result there is no guessing about what's going on. Or about when to operate the pumps. The 12 inch Metameter chart instantly reveals every pressure fluctuation at the distant point. It shows whether this is large or small, abrupt or gradual. It provides an invaluable guide to the station attendant in keeping pumping to a minimum, consistent with satisfactory service.

The resulting savings are so surprising that the chances are you, too, will want further information. Write for Bulletin No. 424-N.

THE BRISTOL COMPANY
WATERBURY CONNECTICUT

Branch Offices: Akron, Birmingham, Boston, Chicago, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco, Seattle. Canada: The Bristol Company of Canada, Limited, Toronto, Ontario. England: Bristol's Instrument Company, Limited, London, N.W. 10.

BRISTOL'S

TRADE MARK REG. U. S. PAT. OFF.

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PERMANENT PROTECTION

Copperweld Fence p
this Substation above
Copperweld rods str
below ground.

Above Ground with COPPERWELD NON-RUSTING FENCE

PROPERTY PROTECTION with Copperweld fence is permanent protection because Copperweld fence fabric is made from the same non-rusting Copperweld wire used so successfully by electric light and power companies for guy and messenger, overhead ground wire, conductors, etc. Copperweld fence fabric don't rust—it never needs to be painted. Avoid costly maintenance and fabric replacement by installing on Copperweld Fence Fabric and Copperweld Barbed Wire.

Write for sample of Copperweld chain link fabric and Copperweld barbed wire. Specify it on your next fence job.

Below Ground with COPPERWEL GROUND RODS a GROUNDING CLAM

EQUIPMENT PROTECTION with Copperweld g rods is permanent protection because Copperweld won't rust. Protective devices are only as good as grounds so be sure your grounds are dependable permanent by specifying Copperweld rods. Their steel core makes deep driving easy. Their thick layer of pure copper prevents rusting and insures galvanic action at the connections. Copperweld rods are available in lengths and diameters to me needs. Pub. 101 describes them. It's yours for the

COPPERWELD STEEL COMPAN

Glassport, Pa.

COPPER · BRONZE COPPERWELD RODS, WIRE, AND STRA

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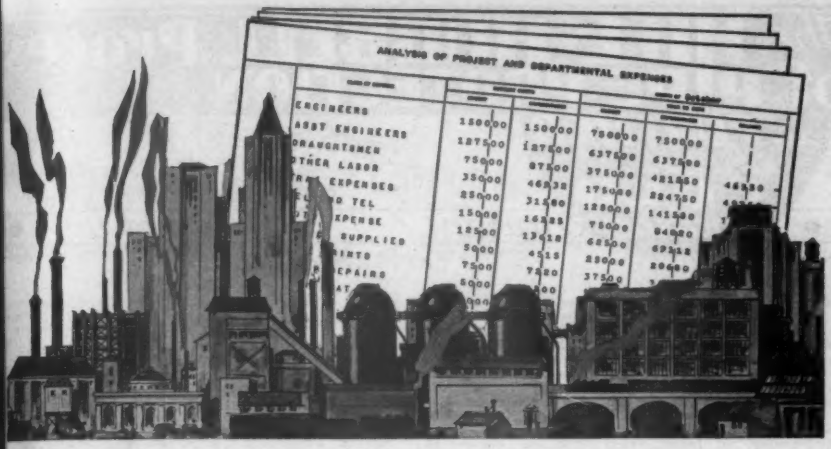

Greater Economy and Speed for

MODERN UTILITY ACCOUNTING

Control today of today's expenses is essential to the success of every utility company. Information must be both accurate and immediately available. In meeting today's demands for greater dependability and speed, the International Electric Accounting Method is proving ideal for all phases of public utility accounting work.

With International Electric Bookkeeping and Accounting Machines, entries are made as the transactions occur. These entries are classified and reclassified mechanically, as often as necessary. No additional manual handling, posting or writing are required.

At the close of each accounting period, operating reports are prepared automatically. Special reports and analyses, as needed, are also produced from the same media, in the most direct and simple manner.

Permanent records in accordance with the standard classification of accounts are completed when the rush of the month-end peak is over by "re-writing" the entry in the ledger. This is accomplished by another fully automatic machine process.

Let us explain how the International Electric Accounting Method can bring accuracy, speed and greater economy to your business. Write for detailed information or visit your nearest IBM office today.

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PRINCIPAL CITIES OF THE WORLD

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The HILL-HUBBELL Proces of PIPE PROTECTION

is FURTHER ahead of COLD Coating than the is ahead of the

The PROTECTIVE EFFICIENCY of cold coating and the HILL-HUBBELL Process can be compared. Cold coating gives about as much protection as a prime coat on a new house. Compared to this the HILL-HUBBELL Process gives the protection equivalent to a prime coat and two coats of quality paint. There is just no comparison,—one actually PROTECTS and the other doesn't. To bear out our contention we quote the following from an A.G.A. Subcommittee report on Pipe Coating and Corrosion—"Their value (cold coatings) as a protection against pitting would probably not justify the trouble and expense of applying them to permanent lines." The PROPER protection of STEEL PIPE by the HILL-HUBBELL Process pays in dollars and cents.

For over 30 years BITURINE ENAMEL, an all-coal tar product, has done an efficient protection job.

Three coats of enamel, one wrapping of Felt, and one covering of Kraft paper are applied mechanically at ONE time with ONE labor cost. There are no bubbles, skips, or holidays with the HILL-HUBBELL Process.

BUY STEEL PIPE, Mill Coated and Wrapped at any of these mills

Central Tube Company
Jones & Laughlin Steel Corporation
National Tube Company
Republic Steel Corporation
Spang, Chalfant & Co., Inc.
The Youngstown Sheet & Tube Company

This bulletin with many illustrations "shows how" it is done,—also contains prices. Write on your letterhead for copy.

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HYDRAULIC TURBINES

FRANCIS AND HIGH SPEED RUNNERS

★ Penstocks
★ Butterfly Valves
★ Power Operated Rack Rakes
★ Gates and Gate Hoists
★ Electrically Welded Racks

NEWPORT NEWS SHIPBUILDING AND DRY DOCK COMPANY
Hydraulic Turbine Division
NEWPORT NEWS, VA. **90 BROAD ST., NEW YORK, N. Y.**

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Whether Your Job Requires a

GIANT OR A PYGMY

A Reel of Large Size PARKWAY CABLE in exceptionally long lengths used to feed power on a New Mississippi River Dam.

CRESCENT MAKES IT

CONTROL CABLE
DROP CABLE
LEAD COVERED CABLE
MAGNET WIRE
PARKWAY CABLE
RUBBER POWER CABLE
SERVICE ENTRANCE CABLE
SIGNAL CABLE
VARNISHED CAMBRIC CABLE
WEATHERPROOF WIRE

All types of Building Wire and all kinds of Special Cables to meet A.S.T.M., A.R.A., I.P.C.E.A., and all Railroad, Government and Utility Companies' Specifications.

Whatever the load—power for a mammoth dam or a simple house wiring job—the comprehensive CRESCENT line can furnish you with Wires and Cables exactly suited to your needs.

And CRESCENT can give you that close, personal type of service which you can expect from only a medium sized, closely knit organization, producing the entire line in one plant, under one management.

CRESCENT INSULATED WIRE & CABLE CO. INC
TRENTON, NEW JERSEY

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WILLIAM A. PRENDERGAST

who was for nine years Chairman of the New York State Public Service Commission; who was Comptroller of the City of New York during the period when the Dual Subway Contracts were consummated; and who has until recently been an officer in one of the leading utility companies of the East,

Discusses Matters of Special Interest to You In

PUBLIC UTILITIES AND THE PEOPLE

In this new volume the author gives a comprehensive picture of the vastly important and complex problems which the utility companies—particularly the electric utilities—are having to face today. Written by a man whose unique background makes him a highly qualified authority, the book is timely to an unusual degree in view of the current agitation over public utility issues. Beginning with a general analysis of the nature and function of public utilities, the author proceeds in a logical and thorough manner to more particular problems. He squarely tackles the vexing question of the "Power Trust," fearlessly considers in three brilliant chapters the functioning of holding companies, likewise devotes three chapters to the much debated subject of valuation, fully considers the problem of rates, and sums up with an estimate of what regulation has done and should do and with a provocative discussion of public ownership. Among the positive conclusions that Mr. Prendergast reaches is the belief that the "Power Trust" does not exist, that valuations should, according to the definition of the Supreme Court, be determined by present reproduction value, and that regulation by state commissions should be perfected and strengthened.

PRICE, $3.00

PUBLIC UTILITIES REPORTS, INC.
Munsey Bldg., Washington, D. C.

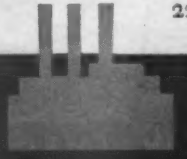
MAKE INSULATION MEET THE TEST OF A GOOD INVESTMENT

GOOD investments can't be judged by price alone. More important is the security provided by full and continued dividends.

Primarily an investment, insulation must be bought on the same basis . . . must prove its worth in terms of maximum cash returns on fuel savings.

Throughout the country, hundreds of power plants have assured themselves of these insulation dividends. Johns-Manville Engineers, using J-M Insulations, have played an important part in increasing plant efficiency and in reducing operating costs.

Backed by J-M's 75 years of research and field experience on insulation problems, these engineers can help you select the insulation best suited to each individual requirement in your plant. They work with insulations of maximum efficiency and uniformity and are able to recommend the right amount and proper application. For details, address Johns-Manville, 22 E. 40th St., N. Y. C.



Johns-Manville INDUSTRIAL INSULATIONS

An insulating material for every temperature . . . for every service condition

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RETAIL STORES PLAY UP "ROBERTSHAW" in their newspaper ads

Thermal Eye

REG. U. S. PAT. OFF

OVEN-HEAT-CONTROL HELPS THEM SELL RANGES

We leave it to you! Successful dealers display Thermal Eye Control in valuable advertising space because it pays them well!

They spotlight the name Robertshaw because it carries weight with customers.

They're smart—those dealers. They know how to put their fingers on features that give a plus to selling. That's why they play up Robertshaw

Follow their tested selling system. Feature Robertshaw Thermal Eye Control in your ads. Capitalize the fact that Robertshaw is the oven-heat-control that's known by women everywhere—respected, trusted, desired!

It signals

Robertshaw's Thermal Eye Control swings a red signal into view when the oven reaches the desired pre-heat temperature. It's an eye-catcher—an action-getter—a feature that makes the entire range more attractive to the customer.

MORE THAN 2,500,000 ROBERTSHAW CONTROLS NOW IN USE

ROBERTSHAW THERMOSTAT COMPANY
YOUNGWOOD, PENNA.

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Unloads a Car of Coal in 1½ Minutes

The Link-Belt rotary railroad car dumper has brought the economies of the vertical lifting type of dumper within the reach of those whose unloading requirements are comparatively low. It handles with ease, cars 26 ft. to 60 ft. long, 7 ft. to 12½ ft. high; 8½ ft. to 11 ft. wide, and with capacities up to 120 tons.

Operation is so simple, automatic and fool-proof, that unskilled labor can perform it readily; it is completely under control at all times, and can be stopped instantly at any point of cycle.

The standard 50 ft. dumper is a paying investment where the unloading requirements do not exceed 15 to 20 cars a day, and of course the savings are greater where more cars are handled. It is readily adaptable to existing or new plants.

Send for folder No. 1004. Address Link-Belt Company, Chicago, Indianapolis, Philadelphia, Atlanta, San Francisco, Toronto. Offices in principal cities.

7081

LINK-BELT

ROTARY RAILROAD CAR DUMPER

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Modern principles of valuing industrial properties and how to apply them

This book presents the basic principles underlying the valuation of industrial properties, with illustrations of their application to specific valuations. The book includes a synopsis of all the controlling United States Supreme Court decisions affecting the practice of valuation, and the development of an entirely new principle of depreciation.

ENGINEERING VALUATION

by **ANSON MARSTON**
Senior Dean of Engineering, Iowa State College

and **THOMAS R. AGG**
Dean of Engineering, Iowa State College

655 pages, 6 x 9, illustrated, $6.00

Practicing engineers and appraisers will find this comprehensive, up-to-date treatise embodies the results of the widely known valuation research carried on for 16 years at the Iowa Engineering Experiment Station. They will find that it embodies also the many court decisions since 1919 which have established and clarified fundamental valuation law. The book presents in practical form the results of work that has done much toward putting the mortality characteristics of industrial property on a sound, scientific, actuarial basis.

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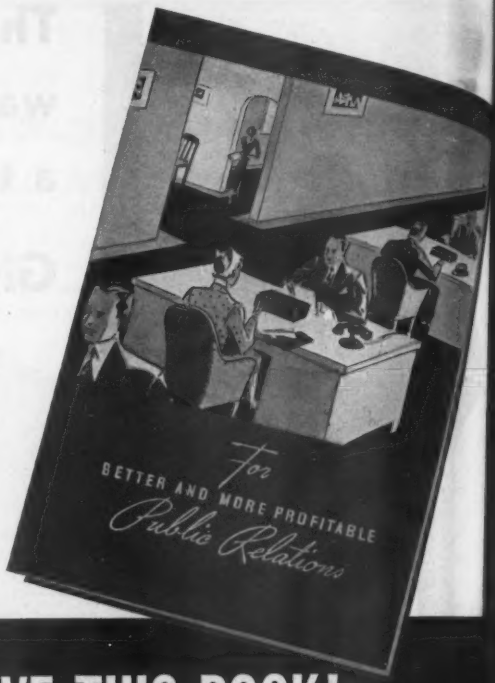

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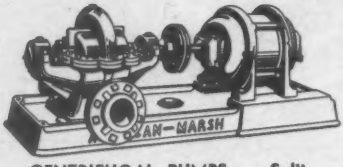

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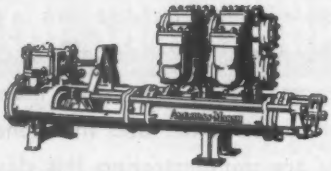

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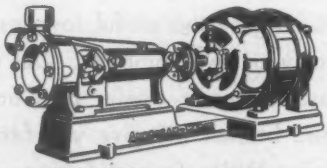

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It's Time to refill your Purification Boxes with CONNELLY IRON SPONGE

This shows why Connelly Iron Sponge lasts longer, purifies better, and "goes farther." Note how ordinary wood shavings pack down under the man at the left. At the right is the patented wood filler used in Iron Sponge, which stands up under the weight. That's why Iron Sponge maintains the bed porosity and cuts down pressure loss through the box. It pays to fill your boxes "for keeps" with Connelly Iron Sponge.

Of course you will want to use this superior gas purification material . . . made under controlled methods to insure a uniform mixture of Connelly selected wood filler with the highly active, hydrated, alkalized iron oxide that gives increased capacity, rapid rejuvenation after fouling, and fewer renewals. Ask for Bulletin No. 100-B-1.

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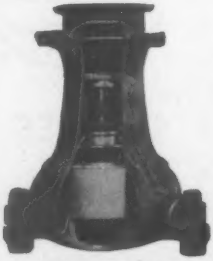

This Neptune Meter Casing (cut away) is 38 years old. The parts are modern. Both Frost-Proof and Split-Case types are protected by Interchangeable Parts.

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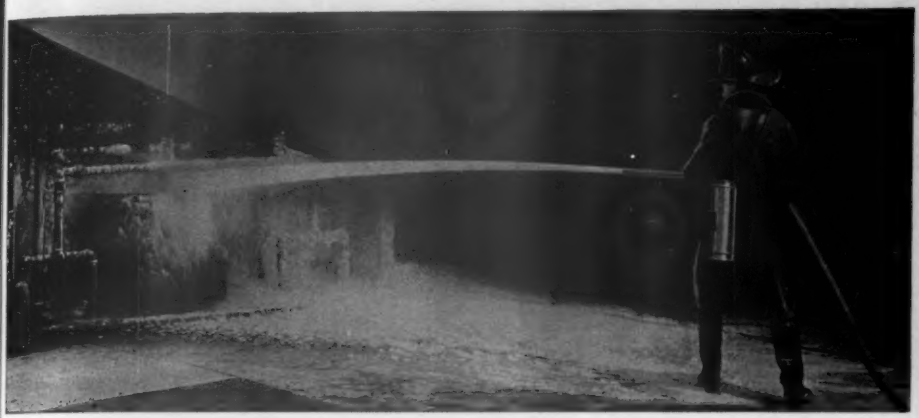

A New Low-Cost Foam Tool!

Combines Water, Solution and Air To Form Fire-Smothering Foam

Public utilities are welcoming this revolutionary larger-capacity foam equipment for flammable liquid fires.

The specially designed PHOMAIRE Play Pipe connects to your hose line (¾" to 2½"). When the water is turned on, PHOMAIDE, a new foam-making solution carried in a Hip Pack, and air are automatically drawn into the water stream in the proper proportions to form foam.

There are no complicated preliminaries, no confusing adjustments, no moving parts. And only one man is required at the Play Pipe.

Less than 20 gallons of water at a pressure of 75 pounds or more are required per minute. This is the only efficient foam unit available for small lines. One gallon of Phomaide Solution makes 350 gallons of foam. 300 to 400 gallons per minute may be continuously produced by merely pouring additional solution into the Hip Pack.

This is NEWS. Without obligation, ask for descriptive literature, prices and a demonstration of the Phomaire Unit illustrated at the left. Don't wait! Mail your request now.

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Business Success_ is also a "*MUST*"!

The success of his business and the way it affects his employes, his stockholders, his customers, is constantly on his mind

THE heftiest problem that harries the thoughtful American business man is *the responsibility to be successful.*

If he fails in that basic duty everything else in the business picture becomes academic detail.

You can't blink the fact—his success is a "must" for *your* sake, as well as his own.

Why? Because only a business that takes in more than it pays out can hope to keep going and meet payrolls.

And only a going business can support the flock of other businesses that depend on it for orders to keep *their* men and machines going.

Finally, only a successful business has the surplus money it takes to work out improvements in products and values which insure future jobs.

During depression, only those companies fortified by success are able to carry employes by dipping into reserves *built up during prosperous times.*

The extent to which American private enterprise *did* dip into reserves during 1930-34—totals by latest estimate some $26,600,000,000.

That's the amount paid out, over and above income, to keep plants going and men at work.

In other words, *industry voluntarily contributed more than twice what the Government spent for "priming the pump"*—not to mention the fact that business *earned* its money, whereas Government money comes from borrowing and taxes.

This shows in cold-turkey figures why business success is a "must."

So also does the illuminating fact that 40,000,000 stockholders and their dependents have a stake in and directly benefit from ownership in American business.

All of these people—all the millions of gainfully employed—all Americans including yourself, *no matter where you live, what your work or how you do it*—have not merely a casual but an acute meal-time interest in seeing business in this country go ahead!

Business Raises Living Standards

Only 35 years ago there was but one insurance policy-holder to ten people—today, every other person in America has a life insurance policy.

There were only 1000 radios in 1920—in 1935, the number of families with radios was 22,869,000.

In 1913, there was one bathtub to ten people in American towns and cities—fifteen years later there was one to every five people.

Thus have people enjoyed an increasing abundance of things in America, a business nation.

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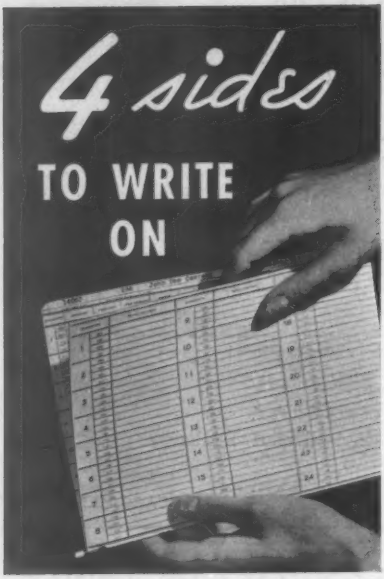

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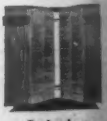
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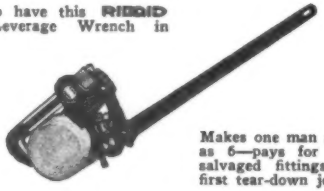

Makes one man as strong as 6—pays for itself in salvaged fittings on the first tear-down job.

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